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Toward the Effective Use of Military Veterinarians in Stability Operations

Melinda Moore, Gail Fisher

Prepared for the United States Army

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Preface

The evolving U.S. Department of Defense (DoD) role established by military policy that creates parity across three core missions of offensive, defensive, and stability operations offers the Army new opportunities and challenges. The Army must now take on stability operations as a new core mission and, by national and DoD policy, must also interact across agencies in coordinating these efforts. Among the range of medical civil-military stability operations in Afghanistan and Iraq are many requests for support from the U.S. Army's Veterinary Service, which is DoD's designated executive agent and source of expertise for animal care, food safety, and prevention and control of animal diseases. But the Veterinary Service has a large worldwide mission and relatively modest numbers among its ranks. Therefore, the Army is interested in providing guidance for deliberative planning for the effective use of the Veterinary Service. In this context, the Army G3/5/7 Strategy, Plans and Policy office asked RAND to undertake a quick-response (two-month) effort to examine the use of military veterinarians in stability operations in Afghanistan and Iraq, aiming to provide preliminary identification and analysis of important planning elements narrowly applicable to the example studied here and potentially applicable more broadly across Army medical and other stability operations activities.

This documented briefing should be of particular interest to Army and DoD audiences concerned with stability and reconstruction operations, and particularly to the medical communities among those audiences.

The research was sponsored by the U.S. Army G3/5/7 office and conducted within RAND Arroyo Center. RAND Arroyo Center, part of the RAND Corporation, is a federally funded research and development center sponsored by the U.S. Army. The RAND Center for Military

Health, a joint endeavor of RAND Arroyo Center and RAND Health, is assisting in the conduct of the project. Questions and comments regarding this research are welcome and should be directed to the principal investigator, Dr. Melinda Moore, at mmoore@rand.org.

The Project Unique Identification Code (PUIC) for the project that produced this document is pending.

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Summary

In late 2005, the U.S. Executive Branch put forth a new national policy for how the U.S. government is to plan and conduct stability and reconstruction operations. Existing military policy and doctrine were further revised, with the Army more definitively articulating its concept of “full spectrum operations,” consisting of offensive, defensive, and stability operations, all core missions and of equal importance. In active theaters such as Afghanistan and Iraq, medical civil-military stability operations figure prominently and include activities carried out by military veterinarians. Within the context of stability operations, military veterinarians can contribute to U.S. strategic goals of economic development and humanitarian assistance, especially related to the agriculture sector. This “quick-response” study examines the policy and doctrine guiding the use of veterinarians in stability operations activities, military and civilian veterinary capabilities, examples of their stability operations activities in Afghanistan and Iraq, and perspectives on interagency cooperation. The study took place over two months, March–April 2008. Interviews were based on a convenience sample and revealed a number of findings that can be directly useful to Army planners. This documented briefing reports not on comprehensive and full-blown research but rather on a preliminary exploratory effort pointing to practical next steps for the Army.

RAND found that military veterinarians are contributing in important ways to economic development in Iraq and Afghanistan and will most likely be important to future stability operations. Most of the countries where stability operations will or conceivably could be conducted will likely have a large agricultural component to their economy, as is the case in both Iraq and Afghanistan. Veterinarians, including military veterinarians, play a critical role in the economic development of a country by supporting local veterinarians and

increasing the availability of needed vaccines and medicines that contribute to both animal health and (possibly) human health. Better animal health means more food, more animals for trade or sale, and ultimately in aggregate, an increase in marketing of animal products nationally and possibly even internationally.

RAND's interview data suggest that military veterinarians can also be valuable during initial stability operations by seizing the initiative in less than permissive, remote, austere environments. Their activities have the potential to shape conditions to achieve military objectives by gaining access and working among the people in the host nation, and also to shape conditions for long-term reconstruction efforts best done by civilian agencies and the host nation.

Review of national and DoD policy and Army doctrine indicates that stability operations are to be conducted simultaneously by various U.S. government agencies and must be coordinated across agencies. Although the State Department has the lead role for coordinating stability operations across the whole of government and with host nation and international agencies, it is not currently coordinating stability operations in Iraq or Afghanistan. RAND interviews suggested that this has resulted in ad hoc coordination among the various government agencies, including veterinarians from the U.S. Army, the U.S. Agency for International Development, and the U.S. Department of Agriculture (USDA), as well as those from the host nations, international organizations, and academia. Although the coordination is ad hoc, and therefore results in inefficient or even competitive efforts, the RAND team found a notably high level of professional cooperation and communication among all parties. For example, monthly telephone meetings coordinated by USDA are open to all agencies and parties and help to answer many questions from those of a technical nature to those of pure logistics. The cooperative activities of veterinarians may serve as an appropriate model for other professional specialists to emulate during current and future stability operations.

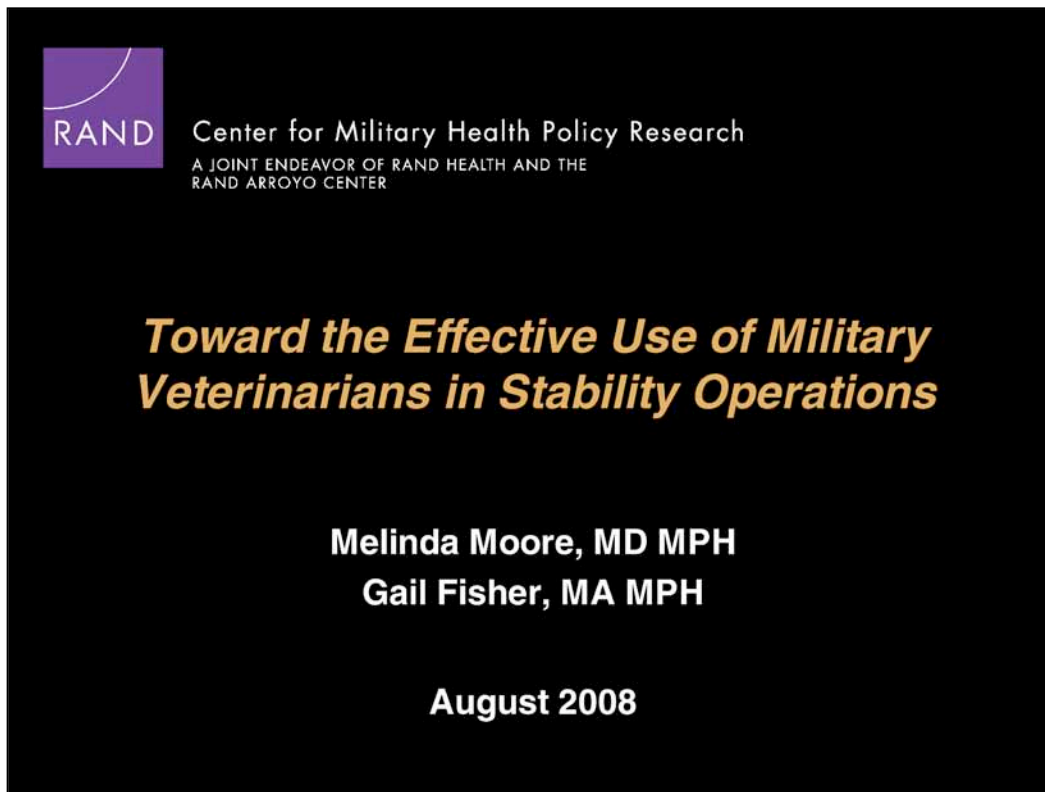
Our key findings respond to the three main study questions, as follows:

1. What is the appropriate role for military veterinarians in stability operations?
 - Veterinarians contribute to immediate relief and longer-term economic development by addressing animal health and food safety in the host nation, at local to national levels as appropriate.
 - Veterinarians conduct activities that fall within larger U.S. government and host nation strategic plans/goals.
 - Veterinarians build intellectual capacity and infrastructure related to animal health and food safety.
 - Military veterinarians have a comparative advantage to operate on shorter time frames, in less secure settings, and in more remote areas than their civilian counterparts.
2. How can the Army help ensure good mission execution as well as the efficient use and effective contributions of military veterinarians?
 - Define the role/mission of veterinarians in stability operations specifically in Army doctrine.
 - Train commanders at all echelons regarding veterinary assets and how to best use them in stability operations.
 - Train veterinarians before deployment: local cultural context, larger strategic goals, interagency coordination.
 - Place and use veterinarians appropriately: match specialty skills well to tasks, channel veterinary skills efficiently.
 - Plan for transition, continuity, and sustainability through appropriately coordinated rotations, leveraging of other veterinary resources, and “hand-offs” as appropriate to civilian agencies.
 - Develop and conduct monitoring and evaluation to identify and act upon “lessons learned.”

3. How should military veterinarians interact with other stakeholders?
 - Recognize that context often suggests the appropriate lead versus supporting roles for military and civilian agencies, e.g., based on operational context, project time frame, level of interaction with host nation.
 - Train veterinarians before deployment to understand strategic U.S. government goals, current activities, and other relevant actors on the ground in theater.
 - Interact directly with technical and other counterparts in theater, e.g., through routine meetings or calls.
 - Plan for transition, continuity, and hand-off once the military mission is completed.

In conclusion, veterinarians contribute to economic development through infrastructure development, education and training, and provision of essential health services. Veterinarians could contribute to all phases of an operation, not just Phase IV (i.e., stability operations). Challenges related to doctrine, planning, training, education, matching skill sets to needs, and developing measures of effectiveness must be addressed to maximize the potential of this small but highly trained pool of professionals and to ensure that future veterinary stability operations efforts are appropriate, well executed, effective, and efficient.

1. Introduction and Methods



The purpose of the study was to examine the current role of veterinarians in economic development during stability operations to support the development of appropriate doctrine and deliberative planning for the effective use of military veterinary capabilities in future stability operations.

For illustrative purposes, this study focuses on Phase IV, nonpermissive environments as exemplified by Afghanistan (Operation Enduring Freedom, or OEF) and Iraq (Operation Iraqi Freedom, or OIF).

We Addressed Three Main Study Questions

- **What is the appropriate role of military veterinarians during stability operations in developing economic capacity?**
- **How can the Army help ensure good mission execution as well as the efficient use and effective contributions of military veterinarians?**
- **How should these veterinarians interact with other stakeholders?**

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The main study questions were:

- What is the appropriate role of military veterinarians during stability operations in developing economic capacity?
- How can the Army help ensure good mission execution as well as the efficient use and effective contributions of military veterinarians?
- How should these veterinarians interact with other stakeholders?

To answer these questions, we examined:

- Policy and doctrine for the use of military and civilian veterinarians in stability operations;

- Veterinary capabilities that reside within the Department of Defense (DoD) and other organizations, and activities that veterinarians have undertaken in Iraq and Afghanistan; and
- The role of context in shaping appropriate activities and agency responsibilities, including interagency coordination.

We Systematically Collected and Analyzed Data

DATA COLLECTION

- **Document review:** *Military policy and doctrine, civilian agency authorities*
- **Interviews with key informants:** *Military veterinary leadership, military and civilian veterinarians with stability operations experience in Afghanistan and/or Iraq*

DATA ANALYSIS

- **Synthesis of information from document review and interviews**
- **Assessment of potential gaps in policy/doctrine**
- **Assessment of themes emerging from interviews**

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Our data collection methods included document review and interviews with key informants. We reviewed military policy and doctrine and civilian agency authorities. Most of the policy information herein derives from this document review.

Acting on specific suggestions from the study sponsor (Army G3/5/7 office), we initially interviewed veterinary military leadership (the director and deputy director of the Veterinary Service Activity and commanders of the Veterinary Corps and Veterinary Command). We then recruited a convenience sample of interviewees with stability operations experience based on suggestions from these leaders and then, in “snowball” fashion, on suggestions from those subsequently interviewed. One team member conducted virtually all interviews either alone or jointly. We interviewed approximately 26 persons in person, by phone, or via email:

- Military veterinary leaders (4).
- Military veterinarians working in Iraq and Afghanistan with Civil Affairs units, on Provincial Reconstruction Teams, or in conventional vet units, or who have deployed and returned from Iraq and Afghanistan (10).
- Civilian veterinarians and agricultural specialists involved in the execution or planning of stability operations in Afghanistan and/or Iraq (5).
- Civilian veterinarians or agricultural specialists in nongovernmental organizations (NGOs) (2).
- Veterinarians or agricultural specialists working for universities in either Afghanistan or Iraq (3).
- A specialist from the Food and Agricultural Organization of the United Nations (1).
- A Department of State officer (1).

We used a standard set of questions for each group, with some tailoring based on the interviewee. We asked questions about the following topics:

- Role—mission, authority, and resources—of interviewee and/or organization, as relates to veterinary activities in stability operations.
- Their interactions with other organizations working in stability operations in Afghanistan and Iraq, especially interagency coordination in the field, and interactions with host nation counterparts.
- Examples of such missions/activities, either their own personal experience (most interviewees) or as related by others (veterinary leadership).
- Factors perceived as contributing to success and, conversely, to less successful veterinary stability operations activities.

- Suggestions to improve the use of military veterinarians in stability operations.

Our data analysis methods included:

- Synthesis of DoD policy/doctrine, civilian agency authorities, and interview information from veterinarians involved in stability operations activities.
- Assessment of potential gaps in military policy and doctrine.
- Assessment of themes emerging from interviews, e.g., regarding what missions are important, key parameters for veterinarians and commanders to keep in mind about executing those missions, and how to interact within the interagency environment.

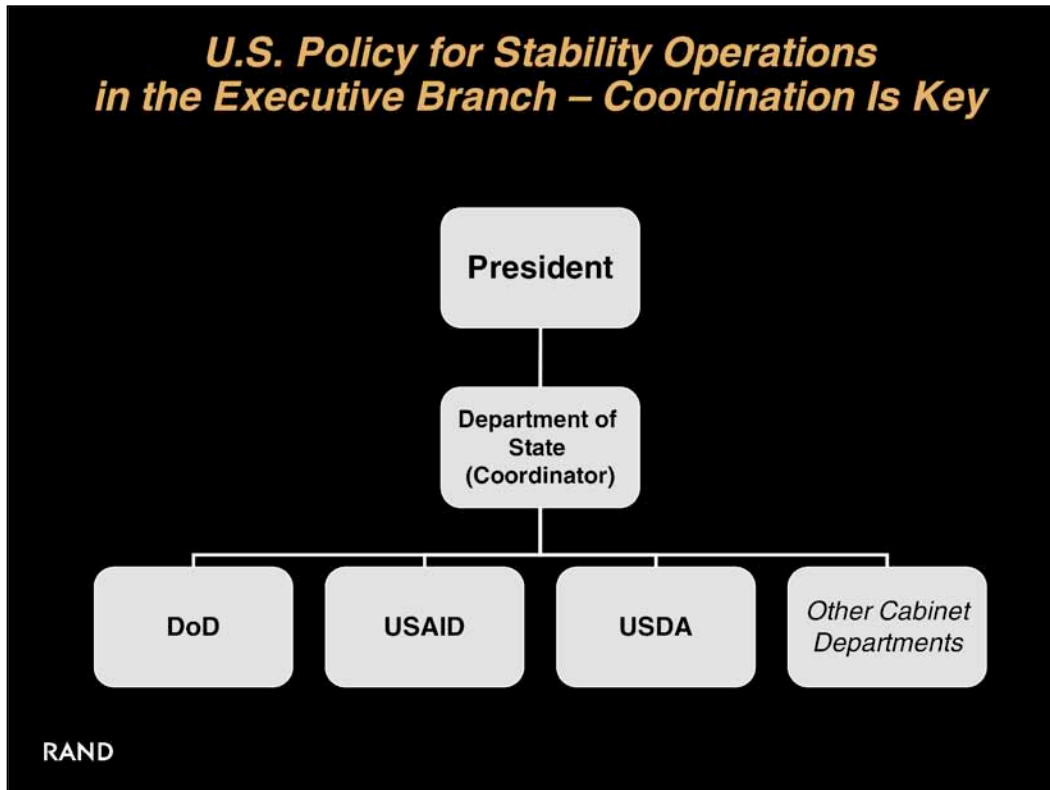
Overview of Presentation

- 1. Introduction and methods**
- 2. Background**
 - *U.S. stability operations*
 - *The role of veterinarians in stability operations*
- 3. Veterinary capabilities and activities**
 - *Military*
 - *Other U.S. government agencies*
 - *Other agencies*
- 4. Synthesis of doctrine/policy and interviews**
 - *Principles of success for stability operations*
 - *Functional roles of agencies and interagency coordination*
 - *Problems identified for the Army*
- 5. Summary and recommendations**

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Chapter 2 of this documented briefing sets the context with a description—drawn from document review—of civilian and military policy regarding stability operations and then a description of the role of veterinarians in such operations. Chapter 3, drawn from document review and interviews with military and civilian personnel based in the United States and overseas, describes the capabilities of veterinarians and their activities in stability operations in Afghanistan and Iraq. It begins with military veterinarians and then those from other U.S. government agencies, followed by other agencies. Chapter 4 synthesizes information gleaned from document review and interviews. It suggests preliminary findings for the successful use of veterinarians in stability operations, the functional roles of different organizations in settings exemplified by Afghanistan and Iraq, and then problems identified for the Army. Chapter 5 presents a summary and our recommendations for the Army.

2. Background



U.S. Stability Operations

A key element defining successful stability operations for the interagency effort involves effective coordination on the part of all agencies.

The President Establishes the National Policy Context for Stability Operations in NSPD-44

On December 7, 2005, the President issued National Security Presidential Directive (NSPD) 44, “Management of Interagency Efforts Concerning Reconstruction and Stabilization,” calling on the Department of State to lead and coordinate the government’s efforts in stability operations.

The State Department Is Establishing a Planning Framework for Stability Operations

The State Department was tasked by NSPD-44 to “coordinate, and strengthen efforts of the United States Government to prepare, plan for, and conduct reconstruction and stabilization assistance and related activities . . .” (page 2), and “to harmonize such efforts with U.S. military plans and operations.” However, the State Department’s Office of the Coordinator for Reconstruction and Stabilization (S/CRS), which was established to take on the new roles directed by NSPD-44, according to our interview, was intentionally not taking the lead in the current contingencies in Iraq and Afghanistan.

One of the tools the State Department has developed for harmonizing the efforts of the various government agencies is the Essential Task Matrix (ETM).¹ Although it is not, according to our interview, an authoritative document intended for planning or coordination of efforts across the interagency, RAND in other work has studied the ETM for its utility to the Army in developing doctrine to prepare for stability operations. The report of that study, titled *Preparing the Army for Stability Operations* (2007), describes the value of the ETM as “imposing a common language . . . in choosing a set of missions that may then lead to the selection of appropriate agencies to implement the tasks” (page 16). Chapter 3 of that report examines the ETM in the context of current Army doctrine and training, with a particular focus on the security sector.²

Tables 2.1 and 2.2 are excerpts from the ETM that relate to our later discussion of the utility and applicability of military veterinarians in stability operations. The ETM describes three phases of stability and reconstruction operations: the first and most pressing set of tasks is called the “initial response” phase, followed by a “transformation” response

¹ <http://www.state.gov/s/crs/rls/52959.htm>

² Thomas S. Szayna, Derek Eaton, and Amy Richardson, *Preparing the Army for Stability Operations: Doctrinal and Interagency Issues*, Santa Monica, CA: RAND Corporation, MG-646-A, 2007. As of May 2008: <http://www.rand.org/pubs/monographs/MG646/>

Table 2.1
Excerpts from the Essential Task Matrix: Public Health

	Initial Response	Transformation	Fostering Sustainability
	<i>Goal: Provide for emergency humanitarian needs</i>	<i>Goal: Establish foundation for development</i>	<i>Goal: Institutionalize long-term development program</i>
Prevention of Epidemics	<ul style="list-style-type: none"> Prevent epidemics through immediate vaccinations 	<ul style="list-style-type: none"> Establish vaccination and screening programs to deal with potential epidemics (especially in refugee camps) through local clinics Establish epidemiology and surveillance programs 	<ul style="list-style-type: none"> Institutionalize countrywide vaccination programs to prevent infectious disease

SOURCE: Department of State, Essential Task Matrix.

Table 2.2
Excerpts from the Essential Task Matrix: Agricultural Development
(Elements Relevant to Veterinarians)

	Initial Response	Transformation	Fostering Sustainability
	<i>Goal: Respond to immediate needs</i>	<i>Goal: Establish foundation for development</i>	<i>Goal: Institutionalize long-term development program</i>
Agricultural Land and Livestock	<ul style="list-style-type: none"> Establish a process to determine land ownership, if disputed Estimate farm income and poverty level Destock if appropriate 	<ul style="list-style-type: none"> Identify constraints to production Assess health, diversity, and number of animals Keep core reproductive group alive through water and/or fodder provision (I) Identify degraded areas Assess the farm labor market Identify the role of women in agriculture Provide veterinary services Restock if appropriate Establish sanitary practices and procedures 	<ul style="list-style-type: none"> (I) Improve design and maintenance of rural farm-to-market roads (I) Establish and implement protocols for rural road construction near rivers (I) Establish simple methods for rural road improvement and maintenance by communities and municipalities Establish grades and standards and food safety procedures for livestock for domestic use and export Improve rangeland management techniques through training of ministry staff and community leaders

Table 2.2—continued

	Initial Response	Transformation	Fostering Sustainability
	<i>Goal: Respond to immediate needs</i>	<i>Goal: Establish foundation for development</i>	<i>Goal: Institutionalize long-term development program</i>
Agricultural Inputs	<ul style="list-style-type: none"> Identify agricultural time lines and necessary inputs according to the agricultural calendar 	<ul style="list-style-type: none"> Select crops and pasture grasses most appropriate for seasonal water availability while still yielding financial return (I) Protect water sources through tree planting, fencing, and community agreement on restriction of activities near water sources or managed grazing on common pasture lands 	<ul style="list-style-type: none"> Support longer-term breeding programs to diversify and rebuild locally adapted lines of important food security crops
Agricultural Policy and Financing	<ul style="list-style-type: none"> Identify policymakers in the agricultural, natural resources and the environment areas and discuss their priorities for their respective sectors Identify existing ministry officials in the country or who have fled and are willing to return to their home Rehabilitate physical structures Establish grant programs for all aspects of agricultural development Ensure equal access by minorities, women, and poor 	<ul style="list-style-type: none"> Promote diversification of agriculture and livestock as well as supporting service sectors Increase human capacity of public sector agricultural institutions (e.g., research, extension, information and statistics, crop protection, veterinary service, food safety) 	<ul style="list-style-type: none"> Ensure equal access and land (quality) distribution for minorities, women, and poor Train ministry staff in country and through international exchanges in the latest scientific and research data Participate in university, private, and public exchange programs Establish financial (credit) services for crop and livestock production and marketing
Agricultural Distribution	<ul style="list-style-type: none"> Channel food aid to promote market activities 	<ul style="list-style-type: none"> (I) Establish transportation and distribution networks, including farm-to-market roads Support the provision of financial services to the domestic transport sector to facilitate movement of agricultural products to markets Initiate collection of public good market information, commodity grading and statistics system 	<ul style="list-style-type: none"> Reestablish and facilitate market-oriented domestic food production Improve food safety systems to facilitate agricultural trade Promote private sector investments in production, processing, transportation, and marketing Establish public-private partnerships to promote agricultural trade

SOURCE: Department of State Essential Task Matrix.

phase, and, finally, a phase oriented toward systems development, to “foster sustainability.” Under the “public health” heading, the ETM establishes vaccinations for humans as a possible initial response to respond to humanitarian needs, and under the agricultural development heading, provision of veterinary services appears under the second phase of operations—transformation. The point here is that vaccinating a subsistence herder’s animals to prevent disease may be equally as important as vaccinating humans, and therefore veterinarians can be useful across all phases of operations—from more immediately needed actions to those that transform and ultimately build sustainable infrastructure.

Apart from the ETM, the S/CRS has developed a three-part framework for guiding interagency cooperation. First, an Interagency Management System has been established and approved by the National Security Council (NSC). This system is made up of several new interagency groups that would be used to respond to crises: a Country Reconstruction and Stabilization Group, an Integration Planning Cell, and an Advance Civilian Team. All three teams would coordinate with DoD at various levels (strategic, operational, and tactical) during a crisis. The second piece of the framework also has been approved by the NSC and establishes procedures for initiating the use of the framework. The third element, a planning guide, had not yet been approved by the NSC as of October 2007, and is apparently being revised to reflect the comments of other agencies.³

³ GAO-08-228T, October 30, 2007. As of August 2008: <http://www.gao.gov/new.items/d08228t.pdf>

DoD Establishes Military Policy for Stability Operations in DoDD 3000.05

- **Sets stability operations (SOs) at parity with combat operations**
- **Recognizes civilian-military teams as an important SO tool, recognizing DoD's unique role in insecure settings**
- **Requires training policy for cooperation across U.S. agencies and with host nation, international, and nongovernmental organizations**
- **Requires development of measures of effectiveness for evaluation of progress toward attaining goals**

DoDD 3000.05: Military Support for SSTR Operations (November 2005)

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In 2005, the Department of Defense issued DoD Directive (DoDD) 3000.05, which placed stability operations on par with combat operations. It also recognized the importance of U.S. government-wide (also called “whole-of-government”) effort, asserting that “military-civilian teams are a critical U.S. government stability operations tool” and establishing policy that DoD lead and support such teams (para 4.5). The functions of stability operations were described as including “security, developing local governance structure, promoting bottom-up economic activity, rebuilding infrastructure, and building indigenous capacity for such tasks.” (para 4.5.1).

This directive led the Department of Defense to more closely examine current policies and doctrine relating to stability operations. For the purposes of this study, we focus on the Army's efforts to refine its conceptualization of stability operations.

Six months later, DoD analyzed its progress and gaps in its first progress report on DoDD 3000.05. Its main findings were:

- Too little time spent on “population-centered stability operations.”
- “Current lack of civilian capacity to deploy in sufficient numbers and perennial inability of civilians to operate in insecure environments.”
- Internal findings: challenges related to doctrine, planning, training, education, matching skill sets to needs, measures of effectiveness.
- Interagency findings: challenges related to planning (coordination and time horizons), coordination (by State Department), resourcing, surge capacity (beyond DoD, USAID).
- External findings: “Whenever advisable,” must use “allied and partner capabilities.”⁴

In 2007, The U.S. Government Accountability Office (GAO) issued a report specifying actions for DoD to improve stability operations and interagency coordination. Its main findings were:

- Progress made, but need to:
 - Improve planning, especially across agencies.
 - Better integrate and share information with non-DoD agencies.
 - Incorporate lessons learned into future plans.
- “DoD has yet to identify and prioritize the full range of capabilities needed for stability operations because DoD has not provided clear guidance on how and when to accomplish this task.”

⁴ Progress Report on DoDD 3000.05 (August 2006).

- Alludes to fragmented efforts by services to address shortfalls, absent comprehensive set of capabilities needed by combatant commanders.⁵

⁵ GAO-07-549, “Actions Needed to Improve DoD’s Stability Operations Approach and Enhance Interagency Planning” (May 2007).

The Army Operationalizes This Policy in Its Action Plan for Stability Operations

- **Five stability operations tasks track with State Department matrix**
- **Doctrine calls for personnel with skills relevant to stability operations, adequately allocated & resourced**
- **Calls for leader development for stability operations**
- **Tasks Medical Command to:**
 - **Develop doctrine and training for interface of medical forces w/ host nation counterparts, interagency, and multinational organizations**
 - **Integrate and deconflict roles of Civil Affairs and medical forces in stability operations**

Army Action Plan for Stability Operations (August 2007)

RAND

DoDD 3000.05 led the Department of Defense to more closely examine current policies and doctrine relating to stability operations. For the purposes of this study, we focus on the Army's efforts to understand, define and execute stability operations.

The Army Operationalizes This Policy in Its Action Plan for Stability Operations

The Army Action Plan for Stability Operations defines five basic tasks: (1) Establishing Civil Security, (2) Establishing Civil Control, (3) Restoring Essential Services, (4) Support of Governance, and (5) Support of Economic and Infrastructure Development.

For this study, we were asked to specifically examine how military veterinarians are being used to support economic and infrastructure development. However, we also learned of the use of military veterinarians for restoring essential services, especially services related to

basic health and food security. The Action Plan describes these as follows:

- Supporting economic development: “Direct and indirect military assistance to local, regional, and national economic and infrastructure development to provide an indigenous capacity and capability for continued economic and infrastructure development” (para (4)(b)).
- Restoring essential services: “Essential services include emergency life-saving medical care, the prevention of epidemic disease, provision of food and water, provisions of emergency shelter from the elements, and the provision of basic sanitation” (para (4)(b)).

The overlap between these two concepts lies in the activities that DoD veterinarians undertake to mitigate animal disease or zoonotic disease in order to mitigate the economic ill effect of poor animal and/or human health. We will return to these two basic tasks when we describe the capabilities of military veterinarians.

The Army’s Updated Field Manual for Operations Provides Doctrinal Guidance and Reflects the Current Context in Iraq and Afghanistan

The Army published the new edition of Field Manual FM 3-0, *Operations*, in February 2008, which provides doctrinal guidance on how the Army will execute stability operations within the constellation of operations that make up warfare. The manual clearly reiterates the interagency nature of stability operations and places stability operations within the context of the Army’s “Full Spectrum Operations,” as described below.

Full Spectrum Operations:

Army forces *combine offensive, defensive, and stability or civil support operations simultaneously* as part of an interdependent joint force to seize,

retain, and exploit the initiative, accepting prudent risk to create opportunities to achieve decisive results. They employ *synchronized action—lethal and nonlethal*—proportional to the mission and informed by a thorough understanding of all variables of the *operational environment*.⁶

The new FM 3-0 defines Full Spectrum Operations to include offense, defense, and stability or civil support operations, acknowledging that these may all be conducted simultaneously, and elevating stability operations to the same importance as offensive and defensive operations.

The *simultaneous and synchronized* nature of these operations is an important context that both complicates and guides the employment of veterinarians in Phase IV stability operations both now in Iraq and Afghanistan as well as in future operations, as we shall discuss later. In fact, it is the simultaneity and synchronization that challenge both DoD and other players in the interagency effort.

FM 3-0 also reiterates the interagency nature of Stability Operations in its definition:

Stability Operations is an overarching term encompassing various military missions, tasks, and activities conducted outside the United States *in coordination with other instruments of national power* to maintain or reestablish a safe and secure environment, and to provide essential governmental services, emergency infrastructure reconstruction, and humanitarian relief.⁷

With the new edition of FM 3-0 the Army has (a) adopted the Joint definition of stability operations and (b) replaced the concept of support operations with “civil support operations” and combined “stability operations” with “civil support operations” in the definition of “Full Spectrum Operations” as we have already discussed.

⁶ FM 3-0 (February 2008).

⁷ FM 3-0 (February 2008).

The current version of FM 3-07, *Stability Operations*, was published before the current update of FM 3-0. It describes stability operations as being “diverse, continuous, and often long-term. Their purpose is to promote and sustain regional and global stability” (FM 3-07 [2003], page 1-2).

Also, as described here, the Army recognizes that stability operations must be conducted “in coordination with other instruments of national power.” Those other instruments of power are diplomatic, information, and economic (para 2-3, FM 3-0), and in fact, the Army Campaign Plan Decision Point 105 (the Action Plan for Stability Operations) addresses the relationship between DoD and these other national instruments of power.

How the Army Views Coordination Role

The Army Action Plan for Stability Operations tasks the Medical Command to develop doctrine and training in a number of areas, including interagency cooperation. As previously described, the State Department was directed by NSPD-44 to be the primary coordinator for stabilization and reconstruction efforts across the U.S. government, which translates, then, into the fact that stability operations for the military are to be supportive of the efforts being led by the State Department. FM 3-0 recognizes this: “Normally Army forces act in support of host nation and other civilian agencies” (para 3-88), and describes the relationship between the Department of State sectors and Army stability tasks.

The Army Action Plan recognizes that the other national instruments of power, which include the U.S. Agency for International Development (USAID) and the State Department, as well as host nation and international organizations, may not be able to take the lead in all circumstances, and DoD should be ready to lead if necessary for the successful execution of the total U.S. government effort:

“US military ground forces should be prepared to lead the activities necessary to accomplish these tasks when indigenous

civil, USG, multinational, or international capacity does not exist or is incapable of assuming responsibility.”⁸

The leadership of coordinated efforts across agencies is context dependent and therefore resistant to careful definition of “roles and responsibilities” in a generic sense. The “Phase IV” operations (as defined in Joint Publication 3-0 as part of a sequence beginning with Phase 0: 0—Shape, I—Deter, II—Seize Initiative, III—Dominate, IV—Stabilize, and V—Enable Civil Authority) are recognized as the most difficult to execute because of the problems of coordination.

The Army’s Stability Operations Field Manual Will Be Reissued Soon

The current 2003 version of FM 3-07 is being updated and is due for release in late 2008. The RAND team reviewed the final draft version of the updated document. It describes the links between U.S. civilian agency actions and military operations. Also, it describes the importance of “seizing the initiative” in stability operations in order to create safety and security and move the local population and nation toward ultimate recovery. Finally, the draft version of FM 3-07 reiterates the important goal for stability operations of providing legitimacy to local and national governments.

Summary of Document Review

National and DoD policy and Army doctrine indicate that stability operations are conducted simultaneously by various U.S. government agencies and must be coordinated across agencies. Although the State Department has the responsibility for coordination, DoD recognizes that that civilian leadership might not be available or appropriate in all settings and is prepared to step in as lead coordinator when needed.

⁸ Army Campaign Plan Decision Point 105, Para 1 (a)(4)(b) (August 2007).

USAID's Development Principles Guide Successful Stability Operations

- The USAID has nine principles for successful reconstruction and development projects:
 - Ownership by country's leaders and people
 - Capacity building
 - Sustainability
 - Selectivity of projects to ensure good resource management
 - Assessment of local conditions
 - Determine results ahead of time
 - Work with partners
 - Be flexible enough to seize opportunities
 - Be accountable in the eyes of the host nation and at home
- To this list we would add "coordinated" across the interagency as described in both DoD policy and NSPD-44

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USAID defines the Nine Principles of Development that guide its efforts to ensure successful development projects. Some of these principles also emerged from our interviews with veterinarians working in Afghanistan and Iraq, as we discuss later (see Chapter 4).

The top three principles are considered key parameters for development success; all of these build toward enforcing the legitimacy of the host nation government, which is also a key goal of military stability operations (FM 3-07, Final Draft, April 2008, from private correspondence).

The first principle is *ownership*. This refers to helping the country identify its own development priorities and assess its development needs. Not only should the country's leadership benefit from development efforts, but its people must buy in as well. This was articulated in all previously described documents in that they required the various

applicable U.S. government agencies to harmonize or coordinate activities with host nation governments.

The second principle is *capacity building*. Capacity building means developing the abilities of the people so that they may support themselves in the long term. In an article in *Parameters*⁹ on the nine principles, former USAID Director Andrew Natsios suggests that one of the critical effects of capacity building is the ability of a country to retain, absorb, and facilitate economic investment. The NSPD-44, Department of State, and DoD all recognize in writing the importance of building capacity within a host nation.

The third principle is perhaps one of the more challenging for DoD—*sustainability*. USAID recognizes that development programs should be designed so that the program or its intended effect will last beyond the exit of U.S. agencies. These first three principles together should drive all of the decisions military commanders and practitioners make in the field, but most likely they present a very difficult challenge for DoD, with its short focus, quick action, and lack of imperative and structure to accommodate projects that encompass all three. In spite of the challenges that DoD has with creating sustainable projects, all DoD policy and doctrine speak directly about the desirability of conducting projects that will be sustainable by the host nation.

The remaining six principles were not explicitly addressed across all policy and doctrinal documents, yet they remain important principles for defining successful stability operations.

The fourth principle of *selectivity* applies to projects conceptualized for achieving goals within DoD as well as projects that are conceived with partner agencies and encompass multiple agency objectives. As Natsios points out, selectivity most closely resembles the principle of “mass” for the military, and to “maximize effectiveness, donor resource

⁹ Andrew S. Natsios, “The Nine Principles of Reconstruction and Development,” *Parameters*, Autumn 2005, pp. 4–20. As of August 2008: <http://www.carlisle.army.mil/usawc/parameters/05autumn/natsios.htm>

allocation must be targeted where it can have an appreciable impact and where the recipient community demonstrates commitment to development goals” (para 1, “Principle 4”).

The fifth principle is that any project must be *based on an assessment of local conditions*. Experience has shown that not only geographic and social and cultural conditions must be receptive to a project, but economic conditions must as well. An often-heard caveat to development projects describes how a development project can have the unintended consequences of creating serious economic imbalance.

The sixth principle is to *determine the results*, or the “objectives” in health terms. Projects must be conducted with some strategic objectives in mind, appropriate to the level of the project. From there, appropriate activities can be planned and executed in order to achieve those objectives.

The seventh principle is *partnership*. By that, USAID recognizes that it will never work alone, and in fact will always implement its development projects within a network of partners. Although DoD often has challenges when seeking nonmilitary partners, it can often use military partners to provide assistance with nonkinetic operations more likely in stability operations.

The eighth principle is perhaps the easiest for DoD, and that is *flexibility* to seize opportunities.

The final principle is remaining *accountable*, not only in the country of operations, but to the American public as well.

Finally, to this list of nine principles we would add the concept of *coordination*. Not only should development activities be conducted by various partners, but they must be coordinated across agencies operating in the same country, including DoD. This is recognized in both NSPD-44 and DoD policy and doctrine.

Future Successful Economic Stability Operations Will Likely Involve Agriculture

- **Afghanistan**

- **70% of Afghanis rely on agriculture for subsistence**
- **More than 2 decades of war and 5 years of drought have severely damaged agricultural production and food security**

- **Iraq**

- **Largest employer, second-largest contributor to GDP**
- **Food security remains a problem**

“Military commanders have expressed the need for increased responsiveness for agricultural development solutions.”

RAND

The Role of Veterinarians in Stability Operations

The previous section establishes the context for stability operations in national and DoD policy and doctrine. The USAID principles for development provide the longer-term context for military stability operations in general. This section addresses the activities of veterinarians more specifically within stability operations, establishing their importance within the agriculture sector and within the context of economic development more broadly.

According to USAID, 70 percent of Afghanis rely on agriculture, and agriculture is the largest and most important economic sector in the total Afghan economy.¹⁰ As in other insecure countries, decades of war

¹⁰ USAID, “Agriculture Projects Have Quick Impact.” As of August 2008: http://www.usaid.gov/stories/afghanistan/fp_afghan_agriculture.html

and years of drought had damaged Afghanistan's agricultural capacity and food security.¹¹

USAID similarly reports the importance of agriculture in Iraq. Not only is it the largest employer, but agriculture is the second-largest contributor to GDP. Food imports are high, and years of neglect are the cause of food insecurity.¹²

An examination of the top ten countries in the Failed States Index (a ranking, conducted by *Foreign Policy* and the Fund for Peace, of states according to their relative scores in several areas of insecurity) reveals that the economies of the most insecure states are largely agricultural. The top countries in the 2007 ranking were Sudan, Iraq, Somalia, Zimbabwe, Chad, Ivory Coast, the Democratic Republic of the Congo, Afghanistan, Guinea, and the Central African Republic.¹³

The UN list of least developed countries, not surprisingly, includes seven of the top ten "failed states" in the index described above: Afghanistan, Sudan, Somalia, Chad, the Democratic Republic of the Congo, Guinea, and the Central African Republic.¹⁴

The point, therefore, is that in most conceivable future stability operations, agriculture and livestock will continue to be critical components of the host nation economy. Hence the need for veterinarians is relatively predictable.

¹¹ International Center for Agricultural Research in the Dry Areas, "Rebuilding Agriculture in Afghanistan." As of August 2008:
<http://www.icarda.cgiar.org/afghanistan/PDF/FHCRAA.pdf>

¹² USAID, "Assistance for Iraq." As of August 2008:
<http://www.usaid.gov/iraq/accomplishments/agri.html>

¹³ *Foreign Policy*, "The Failed States Index 2007." As of August 2008:
http://www.foreignpolicy.com/story/cms.php?story_id=3865&page=7

¹⁴ United Nations Conference on Trade and Development, "UN List of LDCs After the 2006 Triennial Review." As of August 2008:
<http://www.unctad.org/Templates/Page.asp?intItemID=3641&lang=1>

Livestock Are Vital to a Family's Health and Economy

- In developing countries, livestock provide
 - Protein in diets
 - Income
 - Store for family's wealth
 - Draught power
 - Organic fertilizer for crops
 - Transport
- Overall, developing countries are net importers of livestock

"Food security is part of the equation in winning the war."

RAND

In developing countries, livestock play an important part in the agricultural sectors, as well as in the socio-economic status of the people. The UN's Food and Agricultural Organization (FAO) reports, for example, that approximately one-third of the population in the least developed countries (a UN categorization based on national economy, health, and wealth) is undernourished.¹⁵

In a study on herders in southern Afghanistan conducted in 2004, Jost and Aziz report that sheep were consistently recognized as the most valuable animal to a family's overall well-being, providing lambs for sale, oil, milk, wool, and meat. Camels were described as being the next most

¹⁵ M. Upton, *Trade in Livestock and Livestock Products: International Regulation and Role for Economic Development*, UN Food and Agriculture Organization, Livestock Policy Discussion Paper No. 6, March 2002, p. 14. As of August 2008:
http://www.fao.org/ag/againfo/resources/en/publications/sector_discuss/PP_Nr6_Final.pdf

valuable animal for family well-being, providing transport during migrations, moving goods to market, and providing young camels to sell. Camels were also found to be useful in that they provided a means of transporting firewood for sale.¹⁶

Livestock are not only important to the well-being of families, but healthy animals are also critical to the larger economy, as we next discuss.

¹⁶ C. Jost and Z. Aziz, *Men, Women, Children and Livestock: A Livelihoods Analysis of the Afghan Registan Kuchi Focused on Gender and Animal Health*, May 6, 2004. As of August 2008:
http://www.tufts.edu/vet/vet_common/pdf/ivm/report.pdf

Animal Diseases Have Important Economic Consequences

- **Poor animal health can lead to:**
 - **Loss of production and decreased trade**
 - **Decreased human health due to zoonotic disease and foodborne disease**
- **Both of these direct effects can lead to secondary effects:**
 - **Poverty**
 - **Food insecurity (hunger)**
- **Animals of the poor are particularly vulnerable**

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According to an FAO report on livestock and poverty, the animals of the poor are particularly susceptible to poor health because of the expense of keeping the animals healthy, lack of access to animal health services, and/or the unsuitability of animal health services. Poor animal health can lead to loss of production and decreased trade, and can also adversely affect human health through transmission of certain “zoonotic” diseases from animals to humans. Zoonotic diseases account for approximately three-fourths of all emerging infectious diseases over the past four decades. Thus, animal health provides a critical link to human health and especially so in countries with weak or unstable health infrastructures.

Animals in poor health further contribute to human poverty and food insecurity because poor farmers have few reserves upon which to depend in times of drought or war, and so the loss of an individual animal has a larger proportional impact than on a farmer of relative

wealth. For example, the distribution of foot-and-mouth disease across the world follows indicators of poverty, according to the FAO.¹⁷

¹⁷ UN Food and Agricultural Organization *Improved Animal Health for Poverty Reduction and Sustainable Livelihoods*, FAO Animal Production and Health Paper 153, 2002, Chapter 1. As of August 2008:
<http://www.fao.org/docrep/005/Y3542E/y3542e00.HTM>

Rural Poor Have Few Opportunities to Increase Income - Livestock Production Can Be Key

- **Worldwide increase in demand for livestock products offers economic opportunity for herders**
- **Countries with food insecurity have high internal demand for livestock products – milk, meat, eggs, wool**
- **Disease and poor animal nutrition are challenges**

“Livestock offer real and sustainable opportunities to increase incomes and employment (in Afghanistan)”

RAND

Thus, healthy livestock are particularly important to the rural poor. A USAID paper on its Accelerating Sustainable Agriculture Program in Afghanistan described the economic benefit of developing the livestock sector: “Livestock offer real and sustainable opportunities to increase incomes and employment.”¹⁸

Moreover, the worldwide increase in demand for livestock products offers real economic opportunity for herders—from both internal markets (within the country) and external markets. Thus, while disease and poor animal nutrition remain challenges, efforts to overcome these will help ensure healthy livestock and in turn agricultural and economic development in poor rural settings.

¹⁸ USAID workplan on the Accelerating Sustainable Agriculture Program (ASAP), section 2.1, “Livestock Sub-sector Development,” provided to RAND via email correspondence.

Following from this background of national and DoD policy related to stability operations and discussion of the role of veterinarians in such operations, particularly in agrarian societies, the next chapter describes the capabilities, roles, and activities of veterinarians in stability operations in Afghanistan and Iraq. We describe and compare veterinarian capabilities in DoD, other U.S. government agencies, and other (non-U.S. government) organizations.

3. Veterinary Capabilities and Activities

DoD Establishes Policy for the Use of Military Veterinarians in DoDD 6400.4

- **Assigns four core functions:**
 - **Food safety** (*commercial standards, laboratory examination, food inspections at installations*)
 - **Veterinary care**
 - **Prevention and control of animal disease**
 - **Support to medical R&D**
- **Assigns Army Executive Agency, with oversight by ASD(HA)**

DoDD 6400.4: DoD Veterinary Services Program (August 2003)

RAND

Military

There are four primary functions for military veterinarians:

- Food safety.
- Veterinary care of military and government-owned animals.
- Prevention and control of animal disease and zoonotic diseases.
- Support to medical research and development.¹⁹

The Army serves as Executive Agent for military veterinarians, whose leadership resides within the Army Medical Command (see

¹⁹ DoDD 6400.4: DoD Veterinary Services Program (August 2003).

Appendix A), with oversight by the Assistant Secretary of Defense for Health Affairs (ASD(HA)).

There are approximately 1.1 million active component service members in the U.S. military, and of those, only about 2,002 are Army veterinary personnel, including 430 doctors of veterinary medicine (DVM) and 1,572 non-DVMs (see Appendix B). The Army's certified veterinarians are highly specialized (see Appendix C).

Although the Air Force has veterinarians, they are relatively few in number compared to those in the Army and are used strictly for a public health mission, i.e., the Air Force does not have a veterinary mission. The Navy has no veterinarians. All veterinary support as defined in DoDD 6400.4 is provided to the service components by the Army.

The Army Reserve Component (including the selective reserve and the individual ready reserve) holds approximately 372 Veterinary Corps officers, although we were not able to obtain other specific personnel numbers.

Two Types of Conventional Veterinary Units Deploy, but Neither Has Explicit Stability Operations Mission

- **Veterinary Services Detachment:**

- Treats working dogs and animals and performs food sanitation missions
- Staff of 57 personnel: 9 officers, 1 warrant, 47 enlisted
- Army analysis requirement = 17, currently resourced = 14
 - 6 = Active Duty structure
 - 8 = Reserve Component structure

- **Veterinary Medicine Detachment:**

- Surgical and treatment functions for military animals
- Staff of 14 personnel: 3 officers, 11 enlisted
- Army analysis requirement = 5, currently resourced = 3
- None in the Reserve Component structure

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The Army inventory includes both Table of Organization and Equipment (TO&E) and Table of Distribution and Allowances (TDA) veterinary units. The TDA units perform veterinary services at military bases in the United States. The TO&E units perform veterinary care in a theater of operations. The missions for these units are described in the next slide—treating military, contract, and other government animals, conducting food safety missions, and, to a lesser extent, preventing zoonotic diseases.

The Veterinary Service Unit (see Appendix D) treats military working dogs and is responsible for food safety. Each is composed of 57 personnel (9 officers, 1 warrant officer, and 47 enlisted) and has the capability to deploy in teams dependent on the size and location of the unit it is supporting; the basis of allocation is one unit per 60,000 personnel supported. At present, 14 such units are resourced: 6 active and 8 reserve. Each Veterinary Service Unit can support 3 to 6

subordinate teams, and one team can provide food safety capabilities to support 7,000 to 10,000 personnel. One team can provide medical care for up to 50 working dogs, and teams can deploy within a 70-kilometer radius from their base of operations.

The Veterinary Medicine Unit (see Appendix E) has the capability to provide medical and surgical care for 50 to 200 working dogs. These units are staffed by 14 personnel: 3 officers and 11 enlisted; three such units are currently resourced (all within the active duty structure). Care is based on 1 operating room staffed 7 hours per day for up to 3 or 4 days by the detachment personnel. The detachment can provide hospitalization for up to 10 working dogs, providing intermediate-term treatment. The basis for allocation is one unit per 50 to 200 working dogs.

Conventional Veterinary Missions Include Only Suggestive Reference to Stability Operations

Conventional missions for Army veterinarians are to:

- Provide veterinary medical care for all DoD-owned and other government and contract animals;
- Provide for prevention and control of diseases that are transmitted from animals to humans;
- Provide professional support for research, development, test, and evaluation and training involving animals;
- Conduct food safety and quality assurance programs for Army and Navy bases;
- *Respond to the veterinary service requirements of all components of the DoD in time of peace, war, or operations other than war.*

AR 40-905, para 1-1 (August 2006); AR 40-3, para 15-2 (February 2008); DoDD 6400.4, para 4.2.2 (August 2003)

RAND

The conventional missions for veterinarians are listed above and focus on providing care for DoD and government animals and conducting inspections on sources of food for U.S. forces. One catch-all phrase (see last bullet) allows for the conduct of stability operations, although it is nonspecific, and the resulting equipping, manning, and resourcing implications for stability operations are unknown. A more robust discussion of stability operations for veterinarians can be found in an Army field manual; however, field manuals do not convey the requisite authority for resourcing.

Veterinary Missions in Stability Operations Have Expanded Beyond Doctrine

- **The Veterinary Field Manual describes the role of military veterinarians in stability operations as:**
 - **Animal vaccinations for enzootic/zoonotic disease**
 - **Public health and sanitation training**
 - **Training in food safety and inspection**
 - **Herd health and animal husbandry when authorized**
- **The current role of military veterinarians is much larger**

RAND

The Army veterinary field manual (FM) describes stability operations for Army veterinary missions. It articulates the complex nature of the relationship between human and animal health, disease transmission, and economics. It also describes veterinary activities, noted on the slide, that contribute to stability operations.

Although the FM describes generally how veterinarians are to conduct stability operations, in the next slides we describe how military veterinarians are more commonly employed for stability operations.²⁰

²⁰ Army Field Manual 4-02.18, *Veterinary Service Tactics, Techniques, and Procedures* (December 2004).

For Stability Operations, Veterinarians Are Usually Assigned to Civil Affairs Units and PRTs

- **Civil Affairs units have 6 functional specialty areas, and create function teams that perform at tactical, operational, and strategic echelons:**
 - Rule of law
 - Economic stability
 - Governance
 - Infrastructure
 - Public education and information
 - Public health and welfare

(FM 3-05.40, Civil Affairs Operations, September 2006)

- **Veterinarians are also assigned to Provincial Reconstruction Teams (PRTs)**

RAND

Civil Affairs units support commanders at all echelons of war—strategic, operational, and tactical—with their civil-military operations. Of the six functional specialty areas covered by Civil Affairs units, veterinarians are most often assigned to teams addressing public health and welfare.

Within the U.S. Army there is a branch of Civil Affairs personnel (much the same as there are infantry officers or chemical officers or veterinary officers); most Army Civil Affairs units are now within the Army Reserve. The preponderance of the training and equipping for Civil Affairs units is devoted to “generalist” Civil Affairs personnel. However, in order to conduct their civil-military missions, the Civil Affairs units tap into functional specialties such as the veterinarians. Civil Affairs can deploy functional specialty teams, as described above. Veterinarians are assigned to Civil Affairs public health teams and

generally perform missions at the tasking of a warfighter unit commander via his civil-military operations directorate.

The public health teams include physicians, dentists, hospital administrators, nurses, public health specialists, and other medical or health specialties. There are not enough Army Reserve veterinarians assigned to these units, hence vacant positions are often filled with veterinarians from the active component.

In Afghanistan the military developed a new type of unit to facilitate interagency coordination, led by a Civil Affairs officer and staffed with a mixture of personnel from various agencies. These units became known as Provincial Reconstruction Teams (PRTs). Veterinarians from all agencies are working in PRTs, and the PRT program has been expanded into Iraq.

There are also a small number of veterinarians assigned to the Naval Medical Research Unit 3 (NAMRU-3) in Cairo, which has a mission to conduct research and disease surveillance for military personnel deployed to Africa, the Middle East, and Southwest Asia. The unit's mission also includes evaluation of vector-control measures. NAMRU-3 works very closely with host nation ministries, the U.S. National Institutes of Health, the World Health Organization, the U.S. Agency for International Development, and the U.S. Centers for Disease Control and Prevention to monitor and prevent emerging diseases.²¹ We learned from our interviews that NAMRU-3 personnel are engaged with the Food and Agricultural Organization in both Iraq and Afghanistan to develop disease surveillance capacity in both of those countries' laboratories. Also, although the NAMRU lab in Egypt was focused on surveillance of diseases important to humans, because livestock are critical to economies and even to human health, it was suggested that the NAMRU labs around the world might be able to participate in animal disease surveillance in the conduct of stability operations.

²¹ Naval Medical Research Center web site. As of August 2008: <http://www.nhrc.navy.mil/geis/sites/namru3.htm>

We also learned from our interviews that most of the veterinarians who are performing with Civil Affairs units are executing missions at the tactical level of operations. There are no official requirements for senior veterinarians at the operational or strategic level of operations. Therefore, effective planning and interagency coordination suffer. Occasionally the personnel gap at operational levels is filled by veterinary officers assigned to subordinate command staffs. If the gap goes unfilled, projects may be aborted due to personnel rotation.

We conducted interviews with veterinarians who have been deployed and are now returned and working in CONUS, as well as veterinarians who are currently in Iraq and Afghanistan in order to understand what kind of projects they are involved in.

Veterinarians' Missions Have Included Efforts to (1) Build Economic Capacity in the Host Nation

- **Establishing farmers' cooperatives to pool resources**
(Iraq)
- **Establishing a cold-storage facility for local farmers**
(Iraq)
- **Establishing farmers' markets** *(Iraq)*
- **Mentoring small food product companies to enhance food safety** *(Afghanistan)*
- **Identifying and acquiring basic laboratory equipment**
(Iraq and Afghanistan)
- **Establishing professional association that now sells basic medicines across country** *(Afghanistan)*

RAND

As we previously described, we were asked to examine the role of military veterinarians in building economic capacity. The list of activities shown here provides good examples of missions undertaken by military veterinarians to help contribute to economic development, gleaned from our interviews with approximately 20 veterinarians who have worked in Afghanistan and/or Iraq. The activities listed all directly influence the building of agricultural economic capacity in the respective country, and all of them are more “transformative” tasks or could even be considered pieces of larger efforts to “foster sustainability,” using the State Department’s categories of stability operations as described in its Essential Task Matrix.

Veterinarians' Missions Have Included Efforts to (2) Mitigate Adverse Economic Impact

- **Animal health efforts to mitigate the adverse impact of disease on the agricultural economy**
 - **Establishing national animal health surveillance programs** *(Iraq and Afghanistan)*
 - **Collaborating with national ministries to develop avian influenza diagnostics in central labs** *(Iraq and Afghanistan)*
 - **Treating animals for foot-and-mouth disease, animal deworming** *(Afghanistan)*
 - **Vaccinating animals** *(Afghanistan)*
- **Assisting with date palm spraying program** *(Iraq)*

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The activities shown here might not intuitively fall into the “economic capacity building” category as defined by the Army Action Plan. However, as described earlier, animal health is critical to the health and economic well-being of families, especially the rural poor and particularly in countries where the agriculture sector figures importantly in the national economy. Normally, health indicators are applied to humans, but in this instance, should the health of a herd decline because of disease, it is fair to say that the health of the herdsman’s family and his economic production would also decline. Hence, animal health, human health, and economic activities are undeniably linked for these countries. Therefore, we link the surveillance of disease for both humans and animals to economic production.

Also, some of the activities shown here, such as vaccinating animals or treating animals for foot-and-mouth disease, could be considered to be “initial” tasks (as described by the State Department’s ETM), or tasks

that the Army might consider “seizing the initiative.” These tasks alleviate human suffering by immediately providing subsistence herders with perhaps an animal to eat, or perhaps one animal to be sold for food. Thus, these veterinary actions could be considered to be “providing essential services” in the “line of effort” construct from the Army Action Plan for Stability Operations. In any case, whether conceived of as immediate relief to human suffering or as economic development, veterinary operations clearly provide an immediate link between the U.S. military and local nationals.

In our interviews with veterinarians in the field we often heard of the high value of the intelligence gathered in return for veterinary services, which indicates that veterinarians are useful in counterinsurgency operations as well. Because of the volatile nature of both Afghanistan and Iraq, it is important to keep in mind that both stability operations as well as counterinsurgency operations are being simultaneously conducted in a given country. Thus, sometimes the actions of a commander, in the execution of his counterinsurgency operation, conflict with the longer-term goals of stability operations. Our interviews revealed an understanding at all levels and across all agencies that at times the U.S. interagency effort was not effective because of the natural tensions presented by these two different kinds of missions and the goals underlying them.

Below is a list of activities that we learned about from our interviews with veterinarians who have worked, or are still working, in Afghanistan or Iraq:

- Deworming livestock (Iraq and Afghanistan).
- Vaccinating livestock (Iraq and Afghanistan).
- Other treatment of livestock: “VETCAPS” or Cooperative Medical Assistance (CMA) Projects (Iraq and Afghanistan).
- Mentoring companies regarding food sanitation (Afghanistan).
- Conducting food safety inspections (Afghanistan).

- Working alongside host nation veterinarians to develop their knowledge/skills (Afghanistan).
- Investigating avian influenza outbreaks (Iraq and Afghanistan).
- Working with Ministry of Agriculture to develop diagnostic lab capabilities for avian influenza (Iraq and Afghanistan).
- Responding to avian influenza outbreak (Afghanistan).
- Working with Ministry of Agriculture to develop national vaccine program (Iraq).
- Improving veterinary public health practice (Iraq and Afghanistan).
- Working to build national animal health surveillance systems (Iraq and Afghanistan).
- Developing a professional association (Iraq and Afghanistan).
- Promoting food safety (Iraq).
- Rebuilding and/or renovating veterinary schools (Iraq and Afghanistan).
- Supplying or coordinating for texts and teaching materials for schools (Iraq and Afghanistan).
- Developing livestock quality through artificial insemination programs (Iraq).
- Establishing farmers' cooperatives (Iraq).
- Building animal handling facilities for community (Iraq).
- Building/renovating animal slaughter facilities (Iraq).
- Strengthening lab diagnostics at FAO/Kabul veterinary lab (Afghanistan).
- Strengthening lab diagnostics at FAO/Baghdad veterinary lab (Iraq).
- Conducting training in lab diagnosis of infectious diseases (Iraq and Afghanistan).
- Establishing training at local and regional levels for veterinarians, veterinary students, and physicians (Iraq and Afghanistan).

- Helping to build irrigation systems (Iraq).
- Helping to build dipping tanks (Iraq).
- Monitoring date palm spraying campaign (Iraq).
- Reestablishing cold storage facility (Iraq).
- Supporting development of farmers' market (Iraq).
- Identifying and acquiring required lab equipment (Iraq and Afghanistan).
- Sending delegates to a U.S. university for training (Iraq).
- Working with FAO on transboundary animal disease program (Afghanistan).

USAID Is One of Two U.S. Civilian Agencies in the CENTCOM Area Addressing Veterinary Issues

- **Mission:** support long-term economic growth, agriculture, and trade; promote global health; promote democracy, conflict prevention, and humanitarian assistance
- **Authority:** Foreign Assistance Act (1961)
- **Operations:** Works mostly through contractors – including nongovernmental organizations; active in eligible countries (based on level of economic development) in all regions worldwide

RAND

Other U.S. Government Agencies

The U.S. Agency for International Development (USAID) is the U.S. government's development agency. Its mission is to support long-term economic growth, agriculture, and trade; promote global health; and promote democracy, prevent conflicts, and provide humanitarian assistance. USAID operates under the authority of the Foreign Assistance Act of 1961. It supports programs in countries worldwide that meet economic eligibility criteria, operating mostly through contractors, including nongovernmental organizations (NGOs). Some of the contractors working for USAID in agriculture and veterinarian work include:

Afghanistan

- Dutch Committee for Afghanistan.

- Swedish Committee for Afghanistan.
- Afghanistan PEACE Project (Pastoral Engagement, Adaptation and Capacity Enhancement).

Iraq

- Borlaug Institute for International Agriculture and Texas A&M.
- Development Alternatives Inc.

USAID manages the bulk of U.S. economic assistance programs, including approximately \$4.3 billion in programs addressing economic growth, health, and disaster assistance. Some programs are conducted jointly with the State Department. For example, Economic Support Funds are co-managed by both departments, and in 2006 that program was approximately \$2.6 billion. The State Department manages some of its program alone, and combined the two departments managed approximately \$19.6 billion in programs during fiscal year 2006. There are other large programs not included in this amount, such as the Millennium Challenge Corporation, the Peace Corps, the Treasury Department, and the Trade and Development Agency.²²

²² C. Veillette, *Restructuring U.S. Foreign Aid: The Role of the Director of Foreign Assistance in Transformational Development*, Congressional Research Service, CRS Report for Congress RL33491, updated January 23, 2007. As of August 2008: <http://www.nationalaglawcenter.org/assets/crs/RL33491.pdf>

USAID Supports Sustainable Capacity Building Activities in These Countries

- **Develop sustainable fee for service for local veterinarians** *(Afghanistan)*
- **Support service training for para-veterinarians** *(Afghanistan)*
- **Peace Project to develop rangeland management for Kuchi tribe** *(Afghanistan)*
- **Iraq Agricultural Extension Revitalization Program**
 - **Providing instruction**
- **Agriculture Reconstruction and Development for Iraq (ARDI) / Inma Agribusiness Program** *(Iraq)*

RAND

Some illustrative USAID-supported veterinary activities in Afghanistan and Iraq are shown here.

USAID programs in Afghanistan are relatively small. The Dutch Committee, for example, has been working in Afghanistan under a USAID contract to develop a fee-for-service system for para-veterinarians. Para-veterinarians are not fully trained veterinarians but are trained to recognize and treat common problems.

In contrast, USAID programs in Iraq tend to be described in terms of large comprehensive agricultural systems projects. For example, the current “umbrella” program, called *Inma* (an Arabic word meaning “growth”) is described as a program that “will help build meaningful linkages between farmers, agribusinesses, financial services and domestic

and international markets.”²³ The \$343 million program began in 2007 and runs for an initial period of three years with two 1-year option periods. It replaced the earlier program known as the Agriculture Reconstruction and Development Program for Iraq.²⁴

Nonetheless, USAID programs in the agriculture sector are more oriented to systems development, compared to projects described by the DoD veterinarians.

²³ “USAID Awards *Inma* Agribusiness Program in Iraq,” USAID press release, May 16, 2007. As of August 2008:
http://www.usaid.gov/press/releases/2007/pr070516_3.html

²⁴ USAID, “Assistance for Iraq,” May 16, 2007. As of August 2008:
www.usaid.gov/iraq/accomplishments/agri.html

USDA Is the Other U.S. Civilian Agency in the CENTCOM Area Addressing Veterinary Issues

- **Mission:** The USDA Foreign Agricultural Service's (FAS) mission is to create and expand international markets for American agriculture and food producers.
- **Authority:** USDA created Dec 2, 1862 by Abraham Lincoln to disseminate information on food and agriculture. Additional authority transferred from USAID via interagency agreement to support USDA technical consultants
- **Operations:**
 - **FAS: Policy orientation, agriculture liaisons based in U.S. embassies, focal point for coordination of U.S. government efforts in agriculture sector**

RAND

The U.S. Department of Agriculture (USDA) was created nearly 150 years ago. Its Foreign Agriculture Service (FAS) has a mission to create and expand international markets for American agriculture and food products, working out of U.S. embassies in countries around the world. For foreign agriculture-sector development work, such as veterinary activities in stability operations, USDA often operates through support from USAID, under USAID's legislative authority (the Foreign Assistance Act). FAS has been delegated responsibilities in international agriculture:

- Acting as liaison with the Department of State and USAID.
- Conducting agricultural functions related to the World Trade Organization.
- Administering and directing international development and technical assistance programs.

- Animal Plant and Health Inspection Service personnel are loaned to FAS for international duty.²⁵

Some of the USDA personnel are working in Iraq under an interagency agreement with USAID. Because of this, we understand that they work in close coordination with USAID personnel and the USAID-supported NGOs and contracted consortia (such as the Borlaug Institute and Texas A&M University, noted earlier in the description of USAID activities).

²⁵ U.S. Department of Agriculture, Departmental Regulation 1051-002, December 22, 2004. As of August 2008:
<http://www.ocio.usda.gov/directives/doc/DR1051-002.htm>

USDA Activities

Working under an agreement and in close coordination with USAID:

- **Working on PRTs (Iraq/Afghanistan)**
 - Cleaning irrigation canals
- **Working with the Ministry of Agriculture (Iraq)**
 - Developing national animal health and disease program
 - Helped conduct animal disease workshop to establish basics of national plan (Iraq)
- **Sending Iraqi veterinary professors to U.S. for short-term training (Iraq)**

RAND

USDA personnel have key ministerial advisory positions, and because they often work closely with USAID and its contracted agencies, USDA seems positioned to have a coordinating role. USDA personnel work on Provincial Reconstruction Teams (PRTs), which have an interagency coordinating function as they move between the military world and the civilian agencies.

The UN Food and Agricultural Organization Operates in Iraq and Afghanistan

- **Mission:** The FAO is an organization of the United Nations that collects, analyzes, interprets, and disseminates information relating to nutrition, food, and agriculture. It plays a normative role for food safety, and a supporting technical role for animal health.
- **Authority:** Constitution of the UN
- **Operations:** Regional, subregional, and liaison offices provide decentralized structure for programs.

RAND

Other Agencies

In addition to U.S. government agencies, international organizations and others participate in veterinary activities in Afghanistan and Iraq. This section describes some of these organizations, beginning with the main United Nations organization active in this sector, the Food and Agricultural Organization (FAO).

The FAO collects, analyzes, interprets and disseminates information relating to nutrition, food, and agriculture. Within the United Nations system, it plays a normative role for food safety and a supporting technical role for animal health.²⁶

²⁶ Food and Agricultural Organization, *Basic Texts of the Food and Agriculture Organization of the United Nations*. As of August 2008:
<http://www.fao.org/DOCREP/003/X8700E/x8700e01.htm>

We learned from our interviews with military veterinarians and then subsequently with an FAO specialist that the FAO is operating in both Iraq and Afghanistan. In particular, the veterinarians at NAMRU-3 in Egypt had significant contact with the FAO working on projects in Afghanistan. The FAO works with official invitation from the host nation and within guidelines and parameters established with the host nation.

FAO Activities

- **Restoring veterinary services** (*Iraq*)
- **Food safety rebuilding and food safety capacity building** (*Iraq*)
- **Rehabilitation of fisheries** (*Iraq*)
- **Avian influenza - early detection and prevention systems** (*Iraq and Afghanistan*)
- **Dairy system development** (*Afghanistan*)
- **Development of national food security program** (*Afghanistan*)

RAND

The FAO activities can be either technical or systems oriented. They partner with other agencies like USAID to implement their programs in the host nation. Illustrative veterinary activities supported by FAO in Afghanistan and Iraq are shown here.^{27,28}

²⁷ FAO Country Profiles and Mapping Information System, “Iraq—Technical Cooperation,” As of August 2008:

<http://www.fao.org/countryprofiles/index.asp?lang=en&subj=7&iso3=IRQ>

²⁸ FAO Country Profiles and Mapping Information System, “Afghanistan—Technical Cooperation,” As of August 2008:

<http://www.fao.org/countryprofiles/index.asp?lang=en&subj=7&iso3=AFG>

U.S. Academia & Veterinary Associations Are Also Involved in Iraq & Afghanistan, Often Through USAID

Examples of academic institutions:

- **University of Colorado** (*Iraq*)
- **University of Texas** (*Afghanistan and Iraq*)

Veterinary professional associations:

- **American Veterinary Medical Association**
- **American Association of Veterinary Medical Colleges**

RAND

Not only do U.S. government agencies and international organizations support veterinary activities in Afghanistan and Iraq, but academic and professional organizations are also very active in these countries. We found considerable interaction between the various agencies working in Iraq and Afghanistan, even including the professional association for veterinarians and academia. This model of cooperation extends beyond strictly U.S. government interagency cooperation.

Other potential sources for veterinarians arose from our conversations. First, the Air Force has small numbers of veterinarians who might be available for stability operations, especially since we learned that the Air Force veterinarians are used primarily in a public health role. The U.S. Public Health Service (within the Department of Health and Human Services) also has a small corps of veterinarians and

intends to increase its veterinary capability over the course of the next several years.

There are sources of veterinarians available outside the United States as well. Coalition forces may have capabilities that would provide appropriate animal health services, and there may be veterinarians in neighbor countries who would be willing and able to assist with developing veterinarian capacity in stability operations. For example:

Foreign Militaries

- Some have an appropriate level of expertise to offer veterinary services to host nations.
- Offers allies and coalition partners a way to participate.

Regional Veterinarians

- Example drawn from Iraq: Jordanian veterinarians.
- Bring appropriate cultural understanding.
- Language skills.
- Can develop regional professional associations.

Having reviewed the capabilities and activities of military and civilian veterinarians in Afghanistan and Iraq, based on document review and interviews, the following chapter synthesizes this information. It draws out themes related to stability operations, especially issues in interagency coordination, and identifies a number of specific problems for the Army that impede the full success of veterinarians in such operations.

4. Synthesis of Doctrine/Policy and Interviews

Interviews Revealed Principles Considered Important for Successful Stability Operations

- **Intellectual capacity building** was the most-often recommended type of veterinary activity to enhance economic productivity in Iraq and Afghanistan
- **Direct engagement and buy-in of host nation** ministry and private sector counterparts was the second most cited factor important for success
- **Sustainability** (by host nation) of projects was also cited often as an indicator of success, or provided as example of failure

*“Success is defined as meeting a commander’s overall objectives
AND receiving support from local nationals”*

RAND

Principles of Success for Stability Operations

As we have described earlier, the top three of the nine USAID principles for conducting successful development projects were capacity building within the host nation, stakeholder buy-in, and sustainability of the project by the host nation. Interviews with military veterinarians revealed that they understood and supported these principles even if they were directed to conduct operations that did not meet them. Several of these and other interviewees with field experience noted that they had been involved with or known of instances where equipment had been donated, either for learning or for laboratories, that was not technologically feasible to run or maintain in country.

Intellectual capacity building was the most often cited example of capacity building that was important for both Iraq and Afghanistan. Several interviewees (all non-host-nation expatriates) mentioned that seminars in Afghanistan were immensely popular with the host nation veterinarians, enabling an increased professional understanding, increasing professional interaction among the veterinarians, and also providing the United States an important avenue for access to the people.

Although our interviews with veterinarians with current or previous field experience indicated that they understood these concepts, we heard of instances where commanders were not receptive and insisted that military veterinarians conduct activities that were part of the counterinsurgency effort (and therefore had more short-term utility, such as collecting intelligence) and which conflicted with the interagency goals and activities being conducted under stability operations. These misguided activities were sources of frustration for many of the military and civilian veterinarians we interviewed.

Field Perspectives Did Not Suggest Consensus Regarding Functional Roles Across Agencies

- **USDA and DoD can both conduct food safety mission**
- **USAID and DoD can both lead capacity-building efforts**
 - But USAID cannot influence military operations or operate alone in insecure areas
- **No commonly held view of which agency should operate at “tactical” level and which at “strategic” level based on available skill sets**

RAND

Functional Roles of Agencies and Interagency Coordination

Examining *what* the various agencies can do toward economic development with their veterinary capabilities did not predict appropriate roles for the various agencies. There are redundant capabilities among the U.S. government agencies, which is good in that it will ultimately allow for a robust stability operations capacity across the U.S. government. On the other hand, it means that we were not able to find obvious “roles and responsibilities” delineated between the various actors. In fact, there was broad disagreement about the role of military veterinarians. For example, one interviewee commented that military veterinarians should be engaged at the “grass roots” level as well as the national level, whereas another interviewee responded that military veterinarians should absolutely not be involved in providing veterinary services to villages at all.

Finally, there is apparently no adjudication authority in either theater, although several respondents pointed to the two ministries of agriculture as being the ultimate compass if not authority. However, our interviewees felt that the ministries were not yet capable of providing adequate guidance and authority to be truly effective.

However, Our Data Synthesis Did Suggest Comparative Advantages of Different Agencies

- **DoD can operate better in insecure areas and is the only agency able to go everywhere**
- **DoD has “ruggedized” equipment and can reach remote areas fast**
- **DoD can self-sustain in remote areas**
- **USAID has longstanding experience working with host nation infrastructure and within local cultures, mostly through contractors such as NGOs**

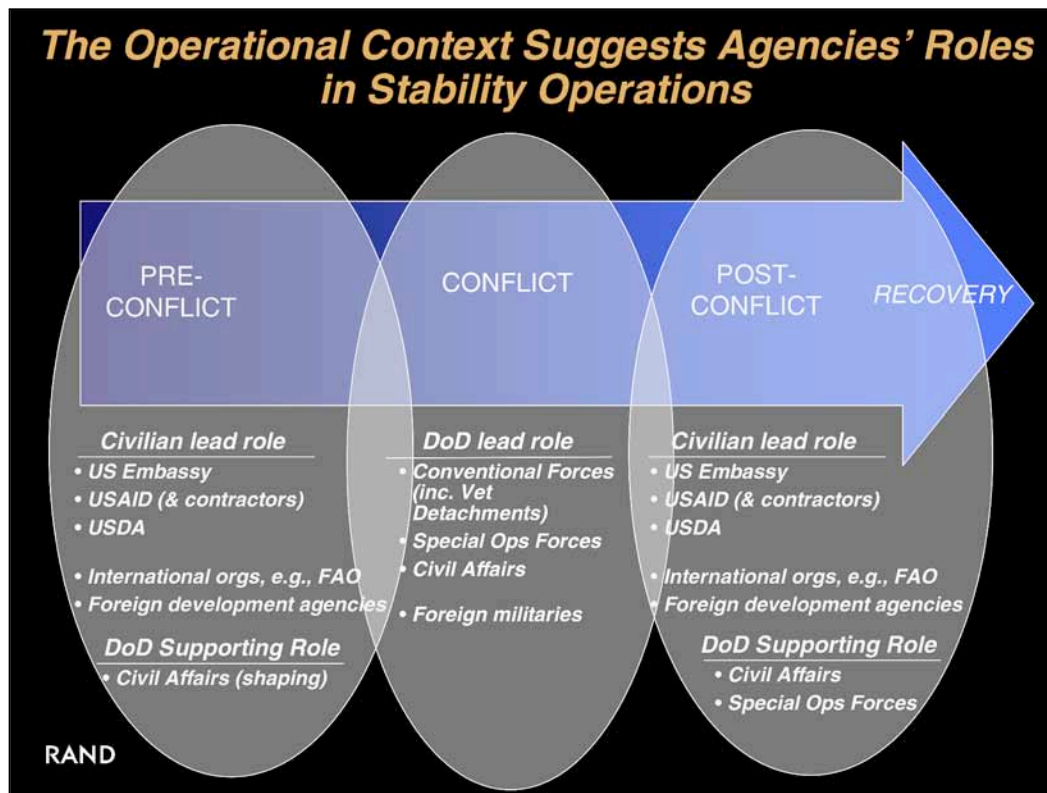
“The military is currently the only agency able to reach all areas of Iraq.”

RAND

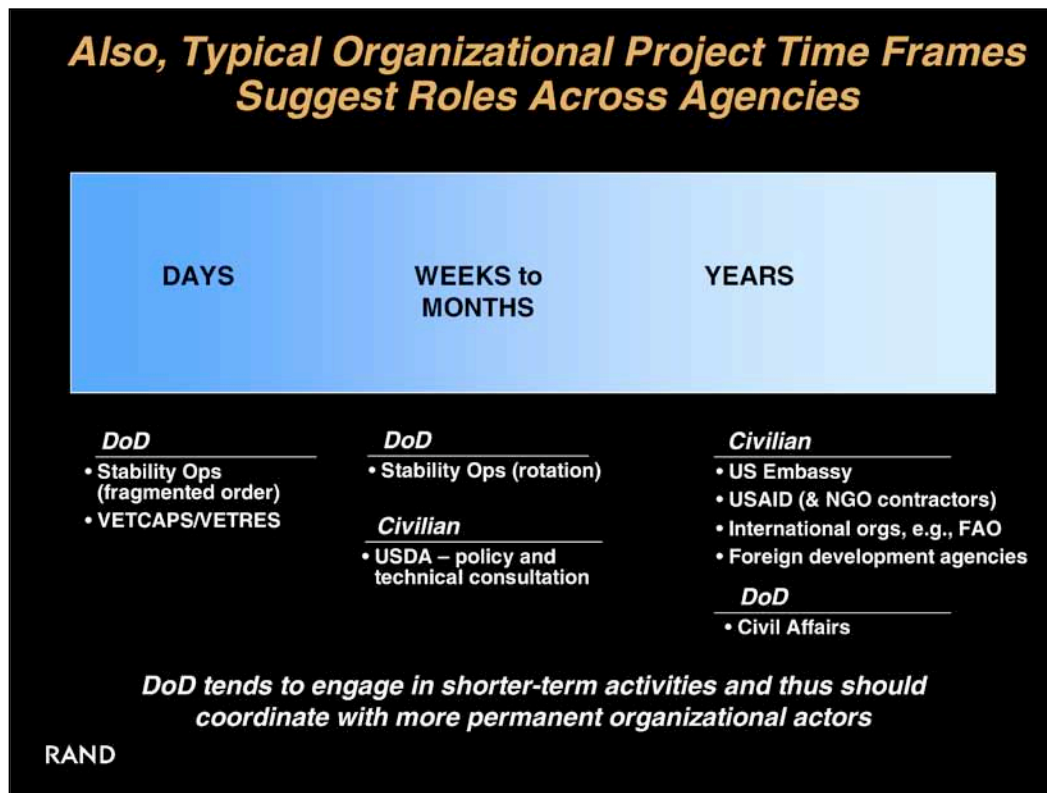
However, an examination of *how* the various agencies operate creates a clearer picture of the advantages of using those agencies. For example, the DoD obviously is better able to operate in insecure areas, and has equipment that allows it to self-sustain in remote areas. On the other hand, USAID typically has NGO contacts in countries that have developed contacts with the local people and the government, and that understand the local cultures.

This is not to say that all were in agreement about how these attributes could affect the roles of the various agencies in theater. The reality seems to be, however, that in some circumstances (particularly in Iraq, where the environment is less secure), military veterinarians are “on-the-ground” coordinators for various activities being led and paid for by civilian agencies either in country or even in the United States. For example, our interviews revealed a story about a conference that veterinarians from the United States were sponsoring, but which the

military veterinarians assisted with by coordinating on the ground. This allowed civilian veterinarians to reduce their time in country.



As shown here, different agencies operate in different operational settings. Civilian agencies are very involved in pre-conflict and post-conflict stability operations activities. DoD is the main actor in combat and counterinsurgency operations. All of these operational settings are present at one time in different parts of Afghanistan and Iraq, which may add to confusion or less than smoothly coordinated transitions and activities across agencies. At times, there are counterinsurgency operations being conducted in close proximity to more traditional “stability operations,” which causes tension between agencies as different agency goals and roles play out in the same population.



Moreover, civilian agencies, especially the State Department (embassy), USAID, and USDA, tend to interact with national-level counterparts, as can DoD Civil Affairs personnel. These are usually long-term interactions.

The State Department also interacts at the provincial level, e.g., through the Provincial Reconstruction Teams (PRTs) it generally leads. These teams may be active for months to even years.

USAID works long-term with the host nation and interacts at the national, provincial, and local levels. Thus, USAID (often through its contractors) is quite likely to have a presence in local areas where DoD is undertaking stability operations.

Challenges to Interagency Coordination Emerged as Themes from Our Interviews

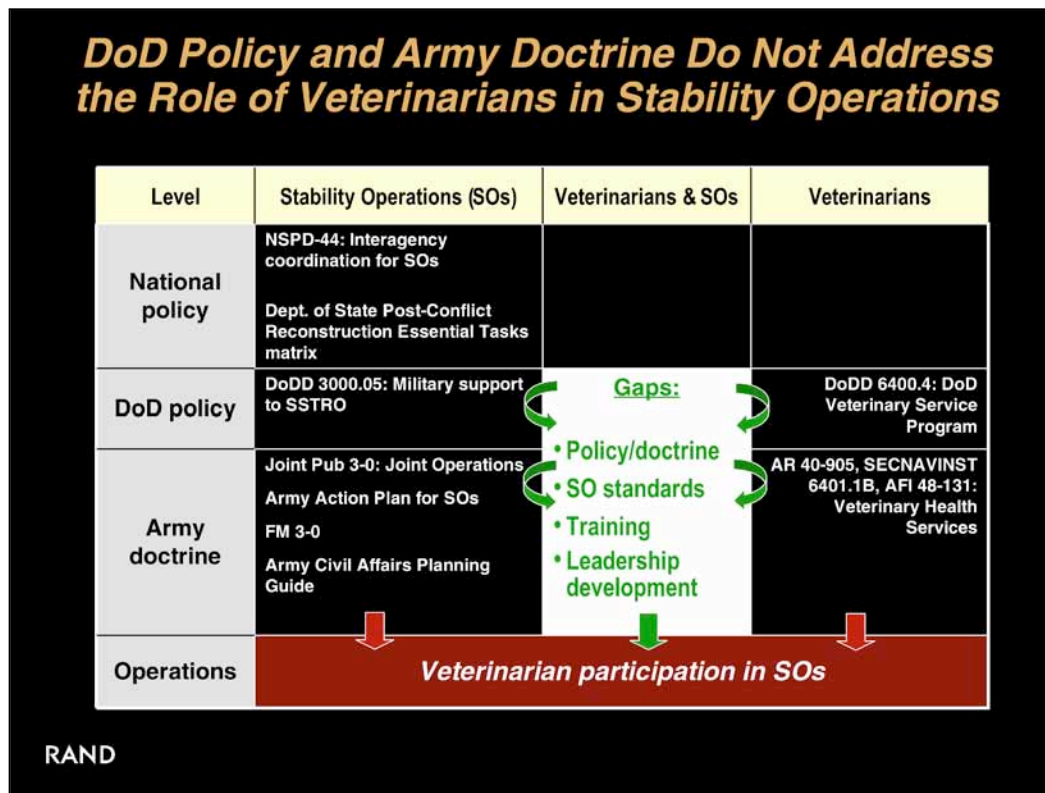
- **The challenge most often cited was the competition of organizational priorities**
 - **Example: One organization gives away goods and services in competition with another organization's effort to create fee-for-service economy**
- **Continuity of personnel was second most cited challenge, including both DoD and civilian agencies**
 - **Frustration with the military and civilian rotational policy that causes drops in situational awareness**
 - **The long length of time it takes to become familiar with context once in theater (6 months)**

“Down at the tactical level there is still a . . . lack of clear direction and poor planning and oversight.”

RAND

There was a lack of common understanding among veterinarians about which agency was charged with or functioned as the primary coordinator in country. Answers to questions about the coordination role ranged from “no agency has coordination responsibility” to “the FAO,” which is an arm of the United Nations with normative responsibilities related to food safety and technical responsibilities related to animal health. Veterinarians in more strategic positions and those with physical proximity to Baghdad or Kabul seemed to know that the USDA functioned within the ministry to disseminate ministry priorities. Veterinarians in more remote locations or in less strategic organizations did not have a clear understanding of interagency coordination. Civilian agency veterinarians generally had an understanding of the coordinating function of the PRTs; however, not all veterinarians on the PRTs seemed to be functioning in a coordinating role.

One noteworthy effort is being made by the veterinary community to help mitigate some of the confusion in theater. The USDA sponsors a monthly telephone call that evolved as the result of a professional meeting of veterinarians in 2004 in Kuwait City. Participants include academia, the military in the United States and in Iraq and Afghanistan, USAID representatives in Iraq and Afghanistan, USDA representatives, and members from the American Veterinary Medical Association. These calls serve not only to let other veterinarians know what is happening around them, but also serve as a resource for veterinarians facing difficult challenges. RAND was invited to attend a monthly call and heard discussion of rotations of veterinarians in and out of country, suggestions for contacts in the United States who might be specialists in a certain problem, and updates on coordination for teaching materials that were being produced in Arabic, for example. These calls are a simple tool that the veterinary community has developed on its own and is using to face the multiple challenges of stability operations.



Problems Identified for the Army

As shown here, policy and doctrine for stability operations flows from national-level policy (NSPD-44) to DoD policy and Army doctrine. Similarly, guidance for conventional veterinary operations also flows from DoD policy and Army doctrine. However, as depicted in the middle column of the figure, no policy or doctrine is explicit in describing the added stability operations mission being required of and conducted by military veterinarians. This creates gaps (and opportunities) related to policy/doctrine, standards for stability operations, training, and leadership development. These gaps in turn contribute to the lack of appropriate training, resourcing, and manning of veterinary units and positions, which then creates a less than optimal context for appropriate, well-executed, effective, and efficient stability operations activities undertaken by military veterinarians.

Our Interviews Pointed to Problems That Impede the Army's Effectiveness in Stability Operations

- 1. Lack of strategic interactions with other agencies**
- 2. Mismatch between veterinary personnel and mission**
- 3. Incomplete (or no) training for commanders at all echelons for employment of veterinary expertise**
- 4. Lack of coordination of veterinary activities within DoD perhaps due to lack of relevant manning document at higher command echelon**
- 5. Incomplete/no formalized training for military veterinarians being asked to conduct stability operations**
- 6. Lack of (required) monitoring and evaluation, to inform future stability operations**

RAND

The course of our interviews uncovered several notable problems that were described to RAND as creating impediments to performance relating to the use of military veterinarians in economic development projects during stability operations.

1. Lack of strategic interactions with other agencies to ensure that DoD goals are consistent with national goals.
2. Mismatch between veterinarian personnel and mission:
 - We learned that veterinarians are sometimes mismatched with their position, as in the case of a veterinary pathologist who is being used to report to a division commander on the progress of a date palm spraying campaign. There are only 47 veterinary pathologists in the Army. Apparently this mismatch between skills and tasks occurs because there is a shortage of

veterinarians, so anyone with veterinary skills is being tasked to fill veterinary positions, regardless of their specialties.

3. Incomplete (or no) training for commanders at all echelons for employment of veterinarian expertise.
 - Related to the mismatch of personnel to mission, we often heard about the inappropriate use of appropriately matched veterinarians by their chain of command.
 - Warfighter commanders misapply valuable resources:
 - Using veterinarians for plant agricultural issues.
 - Using veterinarians to monitor and report on the work of others.
 - Using veterinarians for VETCAP-type missions, even against the advice of the veterinarians and in conflict with the priorities of civilian agencies (USAID, USDA).
4. Absence of veterinarians at higher echelons in the chain of command:
 - We learned that there is some degree of lack of coordination and approval for the use of veterinarians in the battlespace. Some interviewees felt that this problem might be mitigated by the placement of veterinarians higher in the chain of command in order to better advise commanders and to better coordinate across units.
5. Incomplete training for military veterinarians in stability operations:
 - The leadership of the veterinary community has sponsored ad hoc training at Fort Bragg for veterinarians about to deploy with Civil Affairs units. This training is most likely key to some of the successes experienced in theater; however, it has not been institutionalized or formalized or, to our knowledge, resourced.
 - Several interviews illuminated basic gaps in training:

- Large animal training for veterinarians.
- Basic training in the region/context of operations (currently addressed on an ad hoc basis by the veterinary community).
- Formal training related to interagency coordination prior to deployment.

6. Lack of (required) monitoring and evaluation, to inform future stability operations:

- DoDD 3000.05 requires monitoring and evaluation of projects to estimate progress toward a goal.
- Without some evaluation:
 - The range of activities being conducted will continue to be personality-driven.
 - It will be difficult to determine which projects are better than others for economic development.
 - It will be difficult to determine if some goal is being reached.

Based on this synthesis of information from document review and interviews, describing the principles and roles of civilian and military agencies in stability operations, and identification of problems the Army faces in the use of its veterinarians in such operations, the next chapter summarizes our main findings and offers recommendations for analysis and action the Army can undertake to improve the use of these assets in the future.

5. Summary and Recommendations

Veterinarians Are an Important Capability for Stability Operations

- **Veterinary capabilities are well suited for agricultural economies: Projects helping herds also affect health and wealth of family and community**
- **Veterinarians can fulfill both military and longer-term development goals**
- **Characteristics of successful veterinary projects include:**
 - Perceived as needed by the local population
 - Oriented to build capacity
 - Sustainable
 - Coordinated across agencies

“By building agricultural technical capacity within the command structure, military leadership can offer regional and tribal security solutions, while at the same time offering sustainable income.”

RAND

Based on the information we collected and our analyses, we conclude that veterinarians are an important capability for stability operations, which in turn are an important element in U.S. foreign policy and military operations.

The activities we have described in this briefing demonstrate the current utility and suggest the probable future utility of veterinarians in stability operations. Veterinarians can directly contribute to a local, regional, or national economy, and their projects can be sustainable, can contribute to the local capacity, and can be recognized as being needed by the host nation.

Study Limitations

Even though the RAND study was limited to two months, we conducted approximately 26 interviews with representatives from relevant agencies, including military veterinarians assigned to various echelons within the CENTCOM chain of command as well as veterinarians who were serving in U.S.-based positions. The interviews were drawn from a convenience sample of veterinarians identified and available to us during the two-month study period. Therefore, from a methodological standpoint, our information is largely anecdotal in nature and we cannot be sure that we have gained a representative understanding of all issues and viewpoints. Further, although the interviews were systematically conducted and compiled, the analysis provided here is purely qualitative.

We Identified Several Strengths in Military Veterinary Stability Operations Activities

- **Reported activities are consistent with the strategic U.S. goals of economic and infrastructure development**
- **Veterinarians are conducting “initial” activities to relieve human suffering, as well as activities that are “transformational” and “foster sustainability”**
- **The veterinary community has organized itself for interagency cooperation**
 - **Regular phone and email contacts across DoD, USAID, USDA, academic, and AVMA veterinarians**
 - **Development of reach-back capabilities to leverage expertise from off-site**

RAND

Military veterinarians are conducting stability operations that can—and do—support economic and infrastructure development in host nations. The agriculture sector will undoubtedly figure importantly in the economies of countries where future stability operations might be conducted, hence the need for agricultural and livestock specialists. As we have discussed, the health of a subsistence herder’s livestock can enable the herder to have a chance at participating in the local economy, e.g., through the sale of an extra animal. Healthy herds also serve to satisfy the internal demand for livestock products normally found in the least developed countries around the world. Finally, healthy herds can directly lead to healthy humans through reduced transmission of animal diseases to humans.

Veterinarians can play a key immediate role in treating livestock and thereby gain the trust and appreciation of a population. They can also play a critical role in developing a regional or national infrastructure

to assist with more systemic economic development. As we have heard in our interviews from Iraq and Afghanistan, work is ongoing in both countries at the Ministry of Agriculture level by military veterinarians as well as veterinarians working with USDA. Military veterinarians often help address immediate needs and can also fit into medium- and long-term efforts that are usually carried out by civilian agencies, whose missions are more oriented around continuity and sustainable development goals. Hence, veterinarians can play a vital role in economic development at all levels of government, from local to national.

Military veterinarians also have shown success in working within their technical field, not only across U.S. government agencies, but also reaching out to academia and even their own professional association to generate support and resources for their efforts in both Iraq and Afghanistan.

We Identified Challenges Internal and External to the Army

- **Army internal considerations**
 - Gaps in existing policy/doctrine
 - Use of veterinarians
 - Coordination within DoD
- **Army external considerations**
 - Context, nature, and degree of interagency cooperation

RAND

Our review of policy/doctrine documents and our interviews about the roles and responsibilities of military veterinarians within the interagency context during stability operations pointed to several opportunities for the Army to better prepare and employ its forces.

We identified internal challenges, including gaps in internal DoD policy and doctrine, the use of military veterinarians, and coordination of stability operations across DoD. We also identified challenges in interagency cooperation as a major area for DoD to consider externally. We captured some of the key concepts and have described them in terms of opportunities fully within the Army for improvement, as well as external opportunities relating to interagency cooperation.

The Army Still Has Internal Challenges

- **DoD policy and Army doctrine do not specifically address veterinarians in stability operations**
- **Army veterinarians are used for both veterinarian and non-veterinarian functions, and this is exacerbated by rotations and shortage of appropriately trained veterinarians**
- **The Army has not allocated resources for formalized training needed by veterinarians conducting stability operations**
- **Missions are not coordinated within the Army and are often at the discretion of the combat commander**
- **Conventional Veterinary Detachments are being used to conduct stability operations even though there is a perceived shortage of those units**
- **Monitoring and evaluation are not being conducted to help guide stability operations activities**

RAND

First, our document review suggested that DoD policy and Army doctrine do not specifically address the roles of veterinarians in stability operations. Because of this, we hypothesize—and heard—that resources for appropriate training, manning, and equipping for veterinary stability operations missions are being taken from other programmatic areas, “out of hide.”

Also during our interviews we learned of the challenges that the Army faces in not only simply filling required positions for veterinarians, but also in using specialists properly or ensuring that specialists are properly employed. This manning problem is apparently generated and/or exacerbated by the current operations tempo. For example, in the Army Reserve, veterinarians apparently are being pulled for immediate-deploying units from units that are “in the queue” for upcoming deployments.

Another internal opportunity would be for the Army to formalize and institutionalize training for veterinarians in Civil Affairs units and PRTs, primarily, and any other veterinarians about to deploy for stability operations. From our interviews we learned that military veterinarians, for example, are conducting ad hoc training for deploying veterinarians, but this is all being generated informally and therefore borrowing manpower and money from elsewhere. Such training should be properly resourced and formalized in order to provide the support these specialists need to execute their mission effectively and efficiently. Suggestions gleaned from our interviews included predeployment training related to: large animal medicine (to include camels), humanitarian assistance, livestock development in a developing country context, and the current locations and activities of other veterinarians in theater.

We also heard about a perceived lack of coordination within the Army for the use of veterinarians. There are at least two approaches to resolving this. First, military veterinarians conducting stability operations are often placed within Civil Affairs units, i.e., outside the normal military medical chain of command, and under the authority of a commander who may or may not understand how to optimally employ them. The answer to this problem, therefore, is to provide training to both Civil Affairs officers and combat commanders in how to employ specialists, such as veterinarians, within their structure. Another solution to the perceived lack of Army internal coordination might be to place veterinarians at all echelons of the chain of command so as to gain visibility up and down the chain to help ensure that veterinarian activities are as appropriate, well executed, effective, and efficient as possible.

Also from our interviews, we learned that conventional veterinary units are being tasked to conduct stability operations. There is much concern from the military veterinary community that they are being asked to do more than they are resourced to accomplish. This presents

an opportunity for the Army to document and analyze the requirements for military veterinary units and consider solutions.

Finally, military veterinarians are not officially collecting any data on performance or outcomes; therefore, there is no well-documented basis to improve ongoing or future operations through evaluation and lessons learned. There is a real opportunity for the military to employ some of the techniques used by USAID, for example, in monitoring and evaluating its efforts during stability operations, and more systematically incorporating lessons learned into future activities.

..... And Some Challenges in Its Relationships with Interagency Partners

- **Rotation of military and civilian personnel leads to discontinuity of programs**
- **Veterinarians from different agencies in the field (both DoD and civilian agencies) lack a common understanding of which agency has coordination role**
- **Shorter-term military mission requirements can conflict with longer-term civilian agency goals**

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There were also some perceived challenges to more effective interagency coordination. For example, the rotation of personnel within the Army (and also within civilian agencies) presents challenges to continuity of effort both within an agency and across agencies. One example we heard concerned the building of a veterinary school. One agency made plans to build a school, but when the project lead departed the country, the replacement had other ideas and the school remained incomplete.

We also learned that there was no common understanding among those interviewed as to what agency was officially and formally the coordinating agency for veterinary activities. Answers to questions about the coordination role ranged from “there is no agency coordinating” to “FAO.” The problem of coordinating veterinary activities was explained as stemming from lack of mandate, lack of credibility, and lack of resources. No single agency in Iraq, for example, had all of those three

qualities, and coordination was less than optimal as a result. This lesson can be important for the Army as it plans and works within the interagency context for future stability operations.

Finally, the typically short-term goals of military operations that might be considered either counterinsurgency or humanitarian in nature often conflicted with the longer-term goals of the civilian development agencies. While interviewees all acknowledged an understanding of this situation, it still presented a frustration that emerged often during our interviews.

Our Recommendations Highlight Opportunities for Further Analysis Across DOTMLPF Domains

1. Doctrine

- Addressing the role of veterinarians in stability operations specifically in Army doctrine

2. Training

- Institutionalizing predeployment training for veterinarians and commanders
- Training combat commanders how to use veterinarians in stability operations and coordinate across agencies
- Training medical planners on capabilities and uses of veterinarians during stability operations

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The problems just described suggest specific opportunities for Army analysis and action, as shown here and described in more detail below.

1. Doctrine:

- Modify Army Veterinary Service doctrine to include stability operations as a stated mission for veterinarians in order to align resourcing, training, education and leadership development, manning, equipping, planning, and evaluation. Also, aligning doctrine to the current operational reality will allow the Total Army Analysis to appropriately reflect the manpower requirements needed to fill not just conventional veterinary units but also the Civil Affairs units, PRTs, and any other requirements. This doctrinal element is perhaps the most

important of our recommendations, from which flow the others that follow.

2. Training:

- Institutionalize interagency situational awareness in predeployment training for commanders and veterinarians, to include: roles/responsibilities, goals/objectives and relevant ongoing projects of different agencies, and identification of coordinating agency and relevant points of contact in theater.
- Train conventional (combat arms) commanders how to best employ military veterinarians in stability operations, and how to coordinate appropriately within the interagency context.

Our Recommendations Highlight Opportunities for Further Analysis Across DOTMLPF Domains

3. Manning

- Adjusting manning documents to place veterinarians in positions to help oversee, coordinate, and implement stability operations activities

4. Leadership development and education

- Incorporating stability operations into “schoolhouse” curriculum for leadership development

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3. Manning:

- Adjust manning documents to place veterinarians at oversight levels in COCOMs and perhaps as liaisons in other agencies (e.g., USAID, USDA, FAO) to connect activities to strategy and to coordinate activities effectively across relevant agencies. Although RAND did not undertake to examine where veterinarians were placed in theater, we did learn that they are not necessarily strategically placed to facilitate interagency coordination or even oversight of the activities of DoD veterinarians.

4. Education and leadership development:

- Incorporate stability operations into the “schoolhouse” curriculum for leadership development.

Our Recommendations Highlight Additional Opportunities for the Army

5. Operations

- Consider strategies to assure sustainability and transition of veterinary activities beyond military rotations
- Integrate activities and share information as appropriate across DoD and with relevant civilian agencies

6. Planning

- Synchronize location, lead, and supported roles, and interactions with host nation
- Consider creation of interagency rotation plan
- Consider ways to leverage non-DoD veterinarians

7. Monitoring and evaluation

- Develop and implement M&E, capture lessons learned
- Integrate DoD M&E into broader U.S. government M&E

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5. Operations:

- Consider new rotational policies or strategies to mitigate problems associated with rotations such as longer overlap of key veterinarians in theater, and predeployment interagency planning and operational contacts.
- Integrate activities and share information with relevant non-DoD agencies before, during, and after operations.

6. Planning:

- Develop an Interagency Contemporary Operating Environment tool to use when planning operations with Department of State and other actors to synchronize:
 - Location of operations.
 - Lead versus supported roles.

- Interactions with host nation.
- Consider creation of an “interagency” rotation plan for “stability operations specialties” like veterinarians, to ensure continuity.
- Plan for the use of other available assets: other militaries, other U.S. uniformed assets, regional experts, academia, and professional associations.
- Train medical planners on the capabilities and uses of veterinarians during stability operations.

7. Monitoring and evaluation (M&E):

- Develop and implement M&E as part of overall strategy.
- Systematically capture and incorporate lessons learned into future stability operations.
- Integrate DoD M&E into broader U.S. government M&E for stability operations and longer-term development.

Our Recommendations Can Help the Army Use Veterinarians Effectively in Stability Operations

Mission Attribute	Internal Approaches	External (Interagency) Approaches
Appropriate	<ul style="list-style-type: none"> • Establish missions consistent with military & broader U.S. policy and strategic goals 	<ul style="list-style-type: none"> • Allow for DoD veterinary missions to be driven/guided, at least in part, by civilian agencies
Well Executed	<ul style="list-style-type: none"> • Prepare veterinarians well for the operational & interagency context • Engage host nation counterparts to seek their buy-in 	<ul style="list-style-type: none"> • Coordinate activities well with relevant agencies, including hand-off for continuity / sustainability purposes
Efficient	<ul style="list-style-type: none"> • Place and use veterinary assets appropriately • Leverage relevant DoD assets 	<ul style="list-style-type: none"> • Leverage relevant civilian veterinary assets
Effective	<ul style="list-style-type: none"> • Develop and implement DoD Monitoring & Evaluation (M&E) • Capture and incorporate lessons learned 	<ul style="list-style-type: none"> • Design DoD M&E consistent with broader U.S. government and host nation M&E

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In summary, the Army has several opportunities as it goes forward both internally and externally—working with the State Department and other agencies—in planning for future stability operations. The results of this study suggest opportunities for the Army that most likely will necessitate more study. Overcoming some of the internal challenges by formalizing stability operations doctrinally, resourcing units, training as appropriate, and developing more efficient and effective manning solutions will create a context for success.

The key point is that the Army's veterinarians are a small but highly trained pool of people. Therefore, the military should use them very efficiently in any operation, and especially stability operations where they have a lot of potential. While our study pertains only to the use of veterinarians in stability operations, it is possible that our findings might be more broadly applicable to the use of other types of military specialists in such settings.

Specifically, We Answer the Three Study Questions

1. What is the appropriate role for military veterinarians in stability operations?

- **Contribute to immediate relief and longer-term economic development by addressing animal health and food safety in host nation, at local to national level as appropriate**
- **Conduct activities that fall within larger U.S. government and host nation strategic plans/goals**
- **Build intellectual capacity and infrastructure related to animal health and food safety**
- **Recognize DoD comparative advantage to operate on shorter time frames, in less secure settings, and in more remote areas compared to civilian counterparts**

RAND

Military veterinarians can be and are significant assets in support of both immediate relief and longer-term economic development activities during stability operations. Their activities should be planned and conducted within the larger context of U.S. government and host nation strategic plans/goals. Compared to their civilian counterparts, military veterinarians have the unique ability to conduct activities in remote and insecure settings, and they excel at quick operations. Military veterinarians would best be used in activities that play a part in a broader intellectual capacity building effort. For example, they might conduct hands-on training in remote villages while administering vaccines. Or as another example, they might sponsor a conference, or even simply collect data on educational requirements in areas less easily accessible to civilian agencies. Some military veterinarians can complete their programmed activities within a single tour of duty in country. For activities that cannot be completed within such a period, planning for appropriate

transition must take place: either within DoD, i.e., for follow-on military veterinarians, or military-civilian, i.e., hand-off to appropriate civilian agency.

Specifically, We Answer the Three Study Questions

2. How can the Army help ensure good mission execution as well as the efficient use and effective contributions of military veterinarians?

- Define the role/mission of veterinarians in stability operations specifically in Army doctrine
- Train commanders at all echelons regarding veterinary assets and how to best use them in stability operations
- Train veterinarians predeployment – local cultural context, larger strategic goals, interagency coordination
- Place and use veterinarians appropriately – match specialty skills well to tasks, channel veterinary skills efficiently
- Plan for transition, continuity, sustainability through appropriately coordinated rotations, leveraging of other veterinary resources, and “hand-offs” as appropriate to civilian agencies
- Develop and conduct monitoring and evaluation to identify and act upon “lessons learned”

RAND

For the long term, the DoD must first of all explicitly include stability operations in the mission requirements for military veterinarians. This can be through DoD policy or Army doctrine. This, in turn, should create the appropriate context for assessing proper resourcing, training, and manning.

In the immediate term, the Army can take steps, and is taking steps, to ensure that commanders at all echelons and across the entire force understand the principles for development as well as have some available guidance for using military specialties such as veterinarians.

Appropriate predeployment training for military veterinarians should be institutionalized, e.g., related to the local culture, larger strategic goals, and interagency coordination. This will help ensure that these specialists are well prepared for their missions and for the transition of activities after the completion of their rotation. Veterinarians should be placed and used appropriately, matching specialty skills well to tasks

and channeling their skills efficiently: “letting veterinarians be veterinarians.”

Finally, development and implementation of required monitoring and evaluation will also help ensure that future activities can draw from lessons learned.

Specifically, We Answer the Three Study Questions

3. How should military veterinarians interact with other stakeholders?

- **Recognize that context often suggests lead versus supporting role for military and civilian agencies, e.g., based on operational context, project time frame, level of interaction with host nation**
- **Train veterinarians predeployment to understand strategic U.S. government goals, current activities, and other relevant actors on the ground in theater**
- **Interact directly with technical and other counterparts in theater, e.g., through routine meetings or calls**
- **Plan for transition, continuity and hand-off once military mission is completed**

RAND

Interactions with other stakeholders are context dependent. Although the NSPD-44 directed the State Department to be the lead agency in stability operations, experiences in Afghanistan and Iraq suggest that this is not always feasible. Under certain circumstances, in more violent contexts for example, DoD will most likely be the lead agency for stability operations activities. Therefore, more formalized close coordination and planning with other stakeholders should take place from preengagement and predeployment, through operations and occur both in the continental United States as well as in theater; effective coordination should be institutionalized rather than take place unofficially and ad hoc, as appears to be the case at present in these two countries.

**“Improvisation is not a concept of operations
[for stability operations].”**

“Stability operations are not for amateurs.”

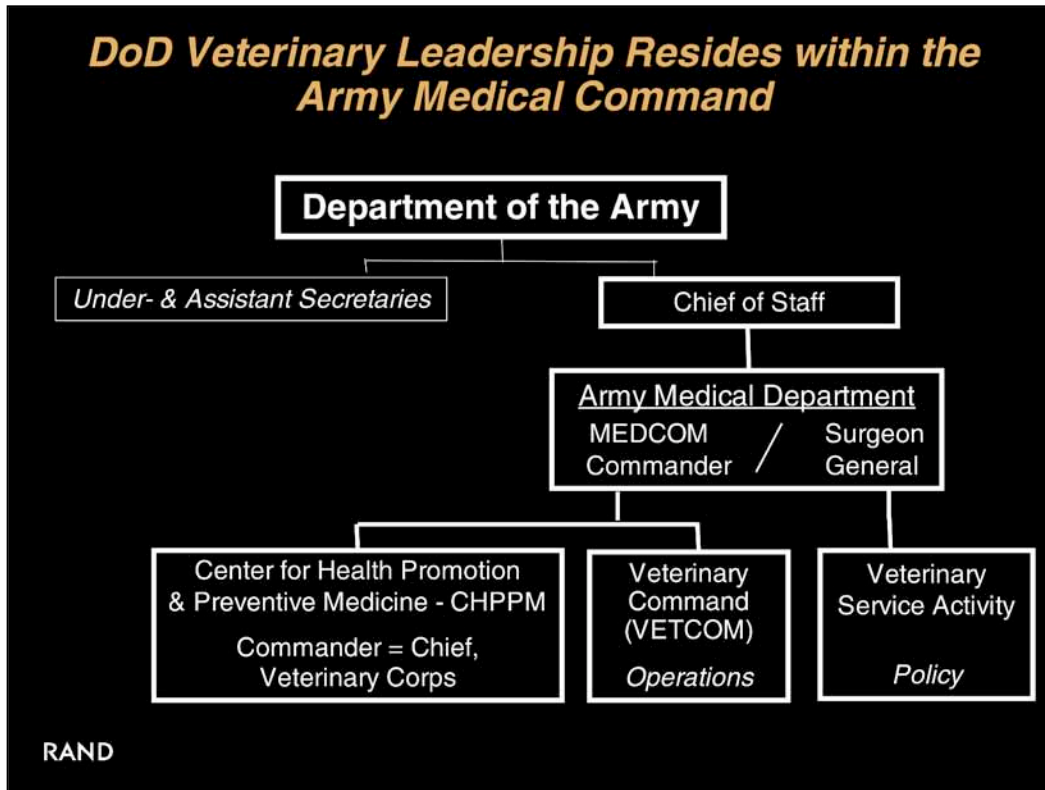
Robert M. Perito

“The U.S. Experience with Provincial Reconstruction Teams in Afghanistan; Lessons Identified.” U.S. Institute of Peace, Special Report 152, October 2005 www.usip.org

RAND

Stability operations must be well conceived and organized and carried out professionally by agencies that span a wide range of organizational cultures. The quotations shown here underscore the importance of good organization and the professional nature of stability operations.

Appendix A. Army Veterinary Leadership



The key military veterinary organizations and three most senior veterinary leaders fall within the Army Medical Command and report to the Army Surgeon General: the Veterinary Service Activity, responsible for policy; and the Veterinary Command, responsible for operations. The chief of the Veterinary Corps is a General Officer who also commands the Army's Center for Health Promotion and Preventive Medicine (CHPPM).

Appendix B. Active Component Veterinary Workforce

The Active Component Veterinary Workforce Is Small Compared to the Total Force

Doctor of Veterinary Medicine (DVM) Specialties	Total Number (% of 430 Total DVMs)
Field Veterinarians - Entry level (64A)	172 (40%)
Public Health Veterinarians (64B)	93 (22%)
Lab Animal Medicine Veterinarians (64C)	58 (14%)
Veterinary Pathologists (64D)	47 (11%)
PhD Veterinarians (64E)	28 (7%)
Veterinary Clinical Specialists (64F)	32 (7%)
Non-DVM Specialties	Total Number (% of 1572 non-DVMs)
Veterinary Service Technicians (Warrant Officers) (640A)	68 (4%)
Animal Care Technicians (68T)	489 (31%)
Food Inspection Specialists (68R)	1015 (65%)

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There are approximately 1.1 million active component service members in the U.S. military, and of those, only about 2,002 are Army veterinarian personnel.

The Army has executive agency to provide all veterinarian services for DoD, according to DoDD 6400.4.²⁹

Although the Air Force has veterinarian staff, they are relatively small in number compared to the number in the Army, and they have a public health, not veterinarian, mission.

²⁹ Department of Defense Directive 6400.4, "DoD Veterinary Services Program," August 22, 2003. As of August 2008:
<http://www.dtic.mil/whs/directives/corres/pdf/640004p.pdf>

The Army Reserve Component (including the selective reserve and the individual ready reserve), holds approximately 372 Veterinary Corps officers, although we were not able to obtain the precise number of all Reserve Component veterinary personnel.

Appendix C. Specialty Areas of Army Veterinarians

Active Army Veterinarians Are Highly Trained

DVM Specialty Board	# Certified
Veterinary Preventive Medicine	110
Veterinary Pathology	41
Laboratory Animal Medicine	31
Veterinary Internal Medicine	10
Veterinary Surgery	7
Veterinary Emergency Medicine	4
Veterinary Microbiology / Epidemiology	3
American Board of Toxicology	2
Veterinary Radiology	1

RAND

Approximately 31 percent of the active Army veterinarians are certified by a specialty board, as compared to approximately 11 percent of the total veterinarians in the American Veterinary Medical Association.³⁰ Of these, the largest number are trained in veterinary preventive medicine (110), followed by veterinary pathology (41), laboratory animal medicine (31), veterinary internal medicine (10), surgery (7), emergency medicine (4), microbiology/epidemiology (3), toxicology (2), and radiology (1).

³⁰ COL Gary Vroegindewey, Director, Veterinary Service Activity, personal communication with author.

Appendix D. Medical Detachment: Veterinary Service Unit

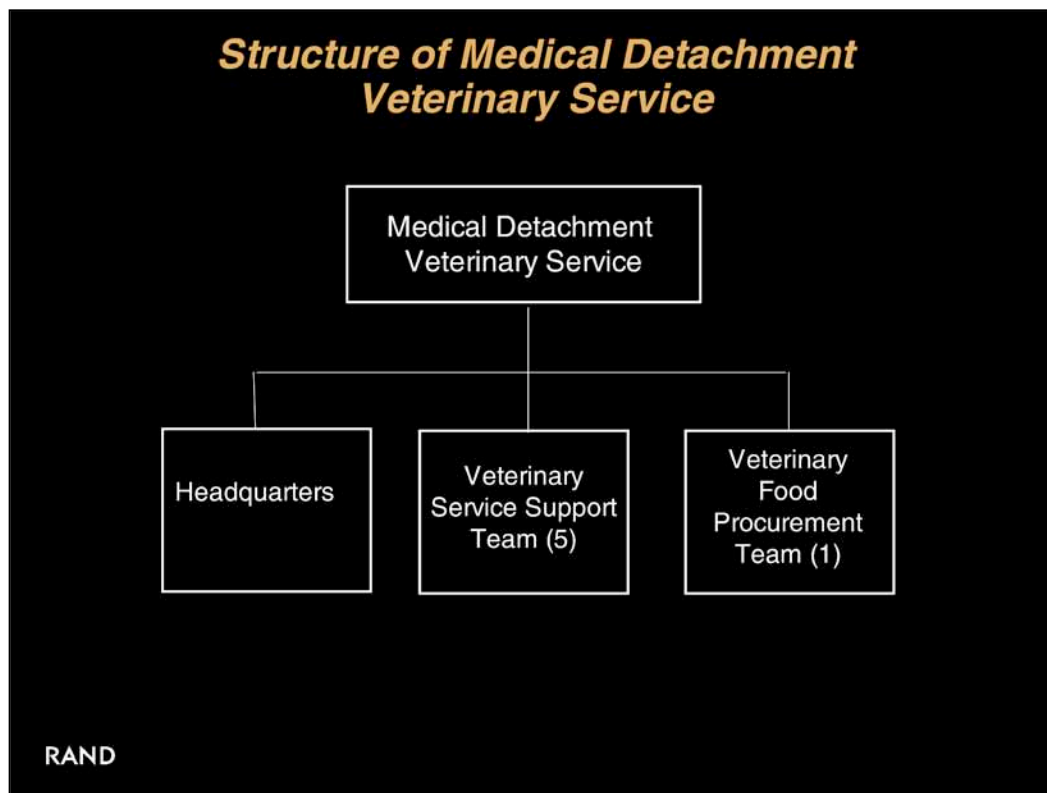
The Medical Detachment Veterinary Service Unit Capabilities

- A Veterinary Service Unit is designed to deploy in teams dependent on the size and location of the unit it is supporting – the basis of allocation is one unit per 60,000 personnel supported
- Each Veterinary Service Unit can support 3 to 6 subordinate teams
- One team can provide food safety capabilities to support 7,000 to 10,000 personnel
- One team can provide medical care for up to 50 working dogs
- Teams can deploy within a 70-km radius from their base of operations

RAND

SOURCE: FM 4-02.18, *Veterinary Service Tactics, Techniques, and Procedures*, December 2004.

The conventional veterinary unit is a medical detachment, Veterinary Service Unit, which has the primary mission of providing medical care for military and government animals as well as conducting food inspections. The capabilities and employment of these units are described above.



SOURCE: FM 4-02.18, Veterinary Service Tactics, Techniques, and Procedures, December 2004.

The conventional veterinary unit is made up of a headquarters element, up to five veterinary teams to treat animals, and one veterinary food inspection team.

Appendix E. Medical Detachment: Veterinary Medicine Unit

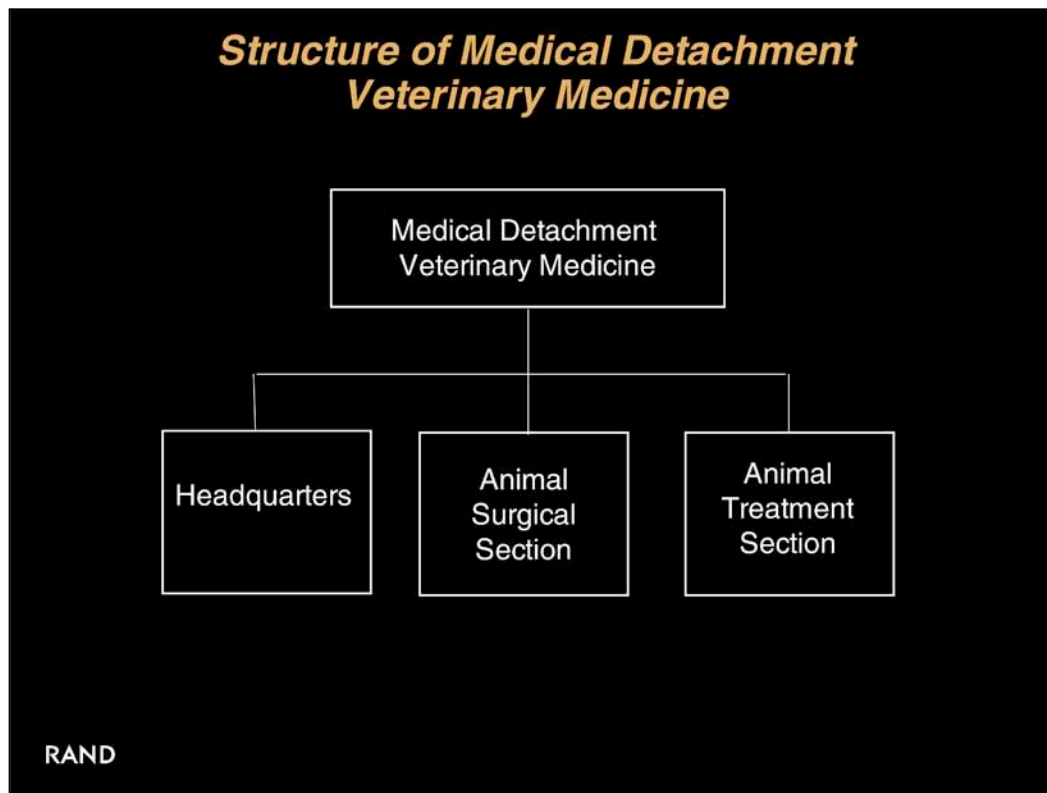
The Medical Detachment Veterinary Medicine Unit Capabilities

- The Veterinary Medicine Unit provides medical and surgical care for 50 to 200 working dogs
- Care is based on 1 operating room staffed 7 hours per day for up to 3 or 4 days
- Can provide hospitalization for up to 10 working dogs providing intermediate-term treatment
- The basis for allocation is one unit per 50–200 working dogs

RAND

SOURCE: FM 4-02.18, *Veterinary Service Tactics, Techniques, and Procedures*, December 2004.

A second type of conventional veterinary unit specializes in surgical care for military and government animals, and its capabilities and employment are described in the slide above.



SOURCE: FM 4-02.18, *Veterinary Service Tactics, Techniques, and Procedures*, December 2004.

A veterinary medical detachment consists of a headquarters, an animal surgical section and an animal treatment section for efficient operation of medical and surgical treatment facilities.